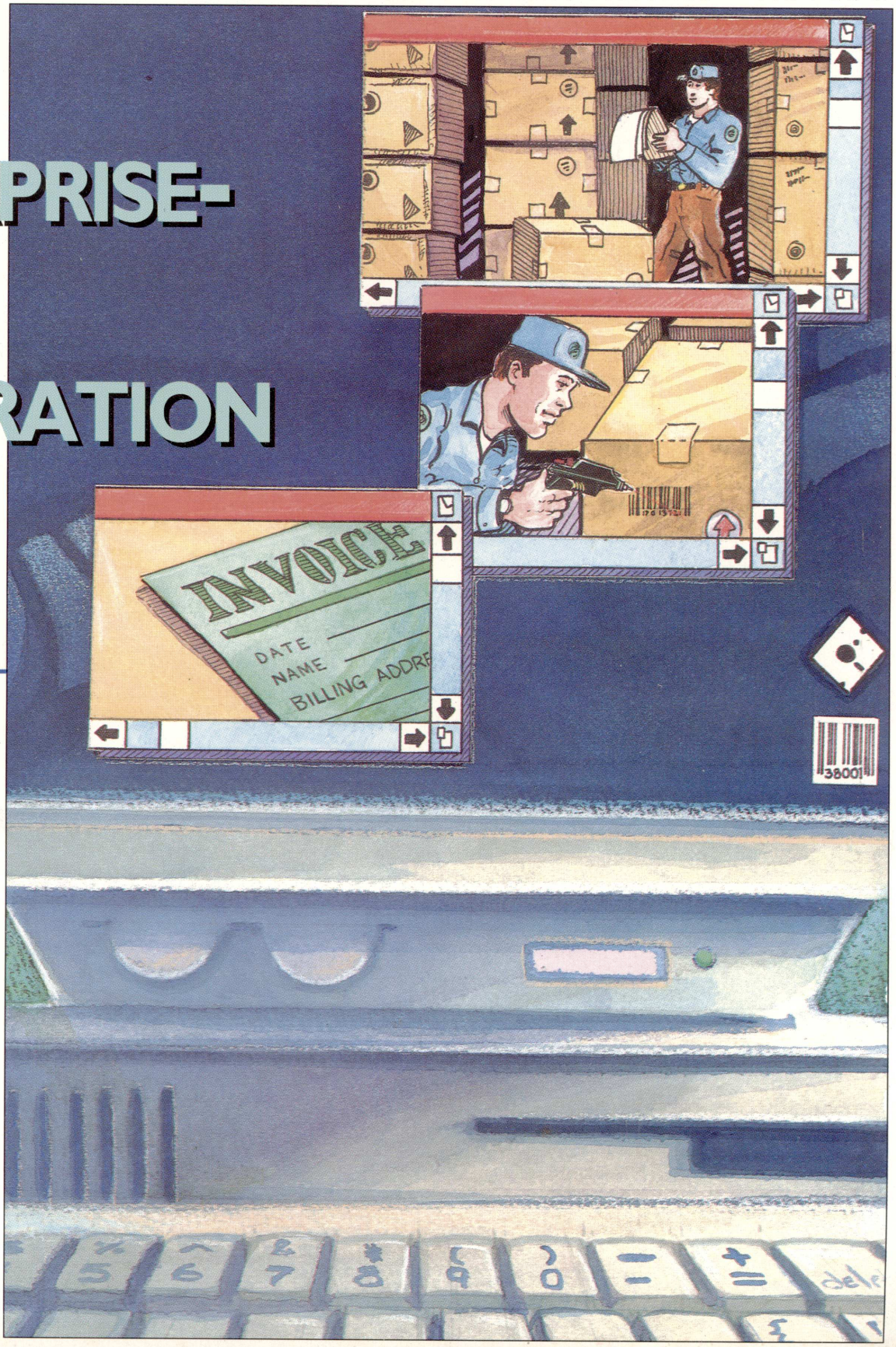
HP Professional

THE MAGAZINE FOR HEWLETT-PACKARD ENTERPRISE COMPUTING ▲ VOL. 7 NO. 11

NOVEMBER 1993

ENTERPRISE-WIDE INTEGRATION

FROM WORKSHOP TO DESKTOP



- **FINANCIAL SOFTWARE**
  Banking On Client-Server
- **EDI**
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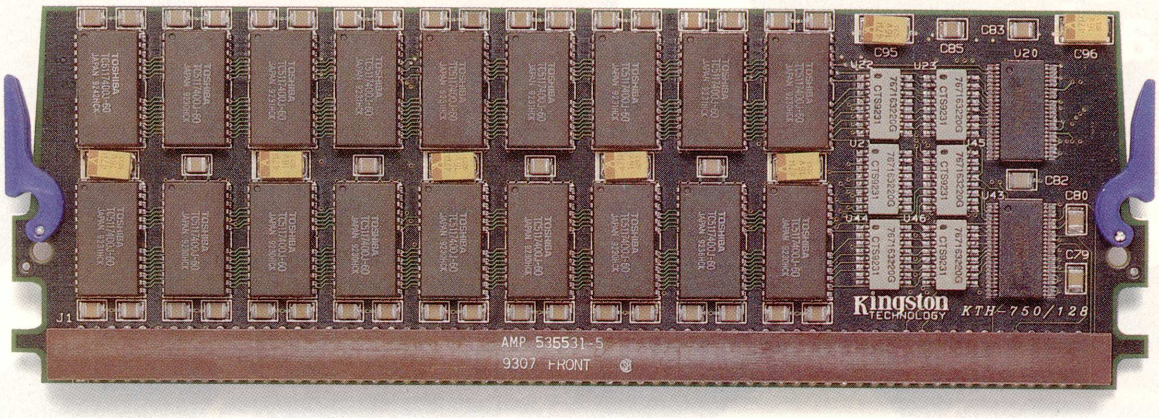

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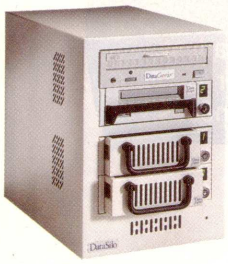

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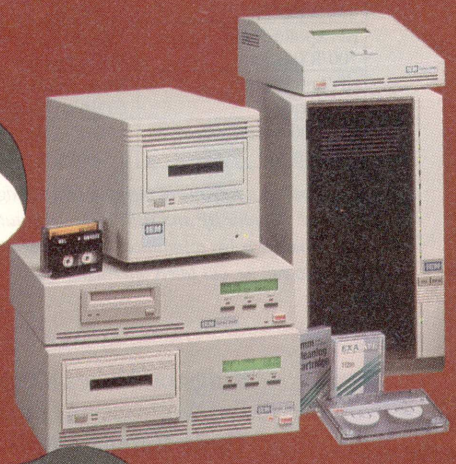

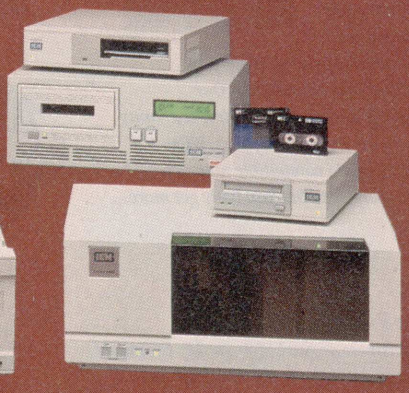

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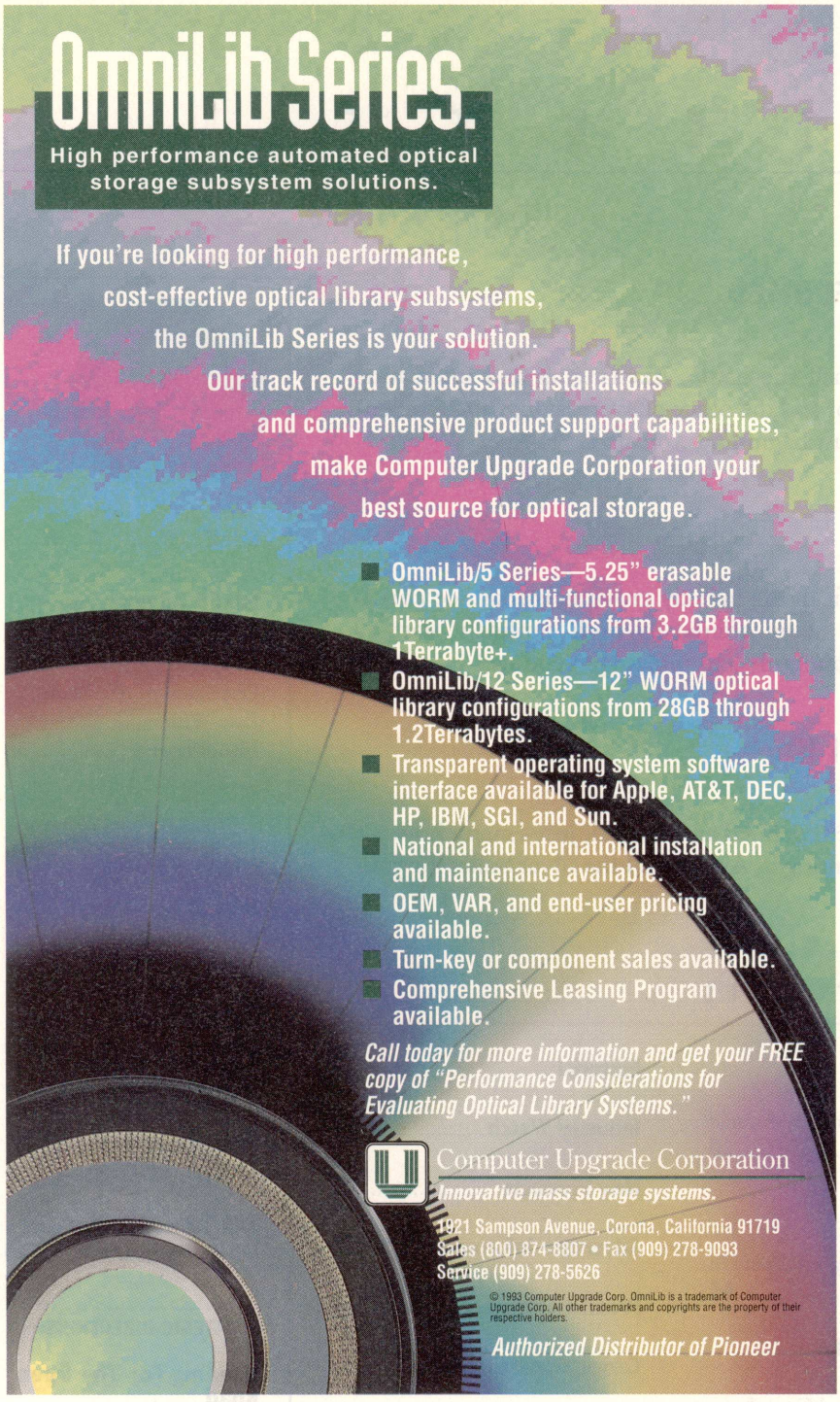

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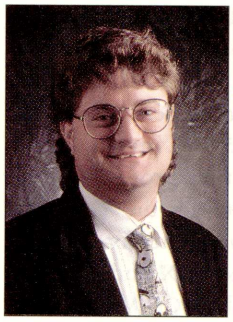
The More Things Change . . .



By Charlie Simpson

This month marks the 30th anniversary of the assassination of John F. Kennedy, an avid supporter of technological as well as social reforms. This anniversary sparks me to look back and wonder how much has changed these past three decades? Has technology delivered the promise of a better life?

As a nation and a people, we're still involved in "conflicts" and "police actions" both abroad and within our own neighborhoods. But this is HP Professional Magazine, not a world issues seminar, so I'll stay on the topic of technology; which I guess is as politically correct for then, as now because our current President also seems to have a hankering for the high tech biz.

I had hoped not to regurgitate Interex keynotes and other conference banter, but I am compelled to mention at least one speech when discussing history, and examing where technology, rather our use or lack of use of technology, has delivered us.

Lew Platt promised attendees at Interex in San Francisco, that despite changes and new approaches, HP's integrity would remain a constant. That certain "core values" could always be counted on.

However, if you were watching *60 Minutes* on October 3, you would have discovered that all is not what it appears to be with the company with the "Boy Scout" image. And HP is just one of several companies implicated in the report including Tandem and Unisys. Also implicated were Whirlpool, Signet Bank and Merrill Lynch.

Apparently American companies are taking advantage of an immigration law loophole by importing programmers through foreign "body shops" to the states, chiefly from India, for up to half the salary of an American programmer; avoiding the tax and benefit burden as well. These programmers then lived on anywhere from below minimum wage to $2,200 a month in less than standard conditions, often several programmers to a single apartment or dwelling. I see the value, but where's the integrity?

I thought that through technology we were striving to eliminate this type of sweat shop environment, not foster it.

Lew Platt refused to comment and when our editors called HP corporate PR, we received the canned response that HP had no idea of the conditions under which its Indian programmers were employed. But we never received the requested documentation substantiating this claim. Now, amidst a law suit filed by a California anti-immigration group, HP says it will change its policies of hiring foreign programmers, and the Clinton administration is investigating the laws that allowed this to happen in the first place.

HAVE WE ARRIVED?

So where is this race for technology getting us, besides leaping through loopholes? In information management we're still talking about technology that dates from post WWII, downsizing from the monolithic systems. Systems that people are still using and will continue to use.

Following Platt's keynote James Wetherbe, professor and director, MIS Research Center, University of Minnesota, proclaimed "Technology is going to get better, so we're going to get better and better and better — then you get to perfect."

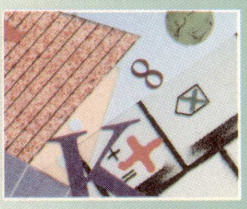
Ask the average user if his or her world is nearing perfection. *Computerworld* last month reported an Andersen Consulting survey that 81 percent of 800 executives from 220 Fortune 1000 firms maintained that their organization's payback on technology spending was "minimal" or "average." Minimal or average. Not what most experts would want us to believe and certainly far from perfect.

I'm not a technology basher, otherwise I'd be editing Granola Professional magazine; however, I need more than white papers and benchmarks. Show me that the quality of life at home and work has improved, before patting yourselves on the back.

The average person spends more time at the office today and just as much time doing housework compared to 30 years ago. This is progress?

So are we on the edge of a paradigm that will change our lives dramatically? Maybe we are on the edge of change. Maybe we've been on the edge since man walked on the moon, and no one wants to go further. But if we're going to move, let's move. It's time to stop sitting around admiring each others' hair.

Charlie Simpson



INDUSTRY WATCH

Bill Sharp

Doing A Snake Dance

Out for a late afternoon desert hike, we walked up a hill sun-baked for a thousand years and down toward a dry creek bed. As I fearlessly led the way past sparse brownish-green grasses, numerous broad, squat, black-barked mesquite trees and saguaro cacti towering 20 to 30 feet high, I suddenly heard it — a rattlesnake.

Almost a continent away, HP unleashed their latest workstations that have their competitors feeling about as safe and secure as desert mice caught out in the open desert with a hungry rattlesnake.

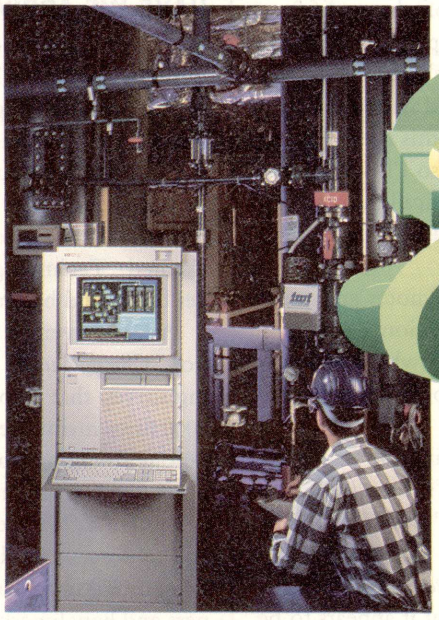
Until now, HP offered Series 700 workstations in versions based on PA-RISC chips running at speeds of 33, 50 and 99 MHz, with the two slower speeds anchoring the low-priced models. Now, those low-end models also are available in a 75 MHz version – the HP Apollo 9000 Model 715/75 and Model 925/75. The faster clock speed, combined with standard cache increased to 256 by 256, provides these new systems with a 70 percent to 90 percent performance improvement over the 50 MHz models, says Conny Gaus, workstation program manager for HP in Chelmsford, Mass.

The primary difference between the two models is the memory and I/O expandability of the 725. Performance for these systems is the same, with 61 SPECint92 and 113 SPECfp92. Board upgrades are available for existing 715/50 and 725/50 systems. Color versions of the Model 715/75 start at $17,995; the 725/75 starts at $20,995 (grayscale models are available for a bit less).

Both models are intended for mechanical and electronic design, chemical applications, geographical information systems and high performance financial applications.

At the same time, HP doubled the processor speed of its hardened industrial workstations by introducing the model 745i with a 100 MHz PA-RISC processor.

While adding new editions to fill out its workstation family, HP also did a total revamp of its X station models. HP's



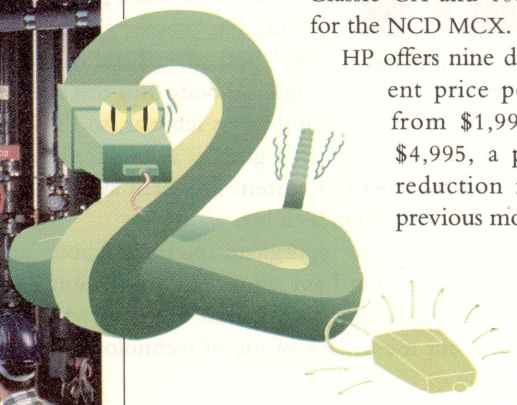
Along with new models, HP has revamped existing industrial workstations

X station line is based on the Intel i960 RISC CPU and has been so well received that HP is now recognized as the number one supplier of color X stations.

Forty percent growth in the X station market has not gone unnoticed by other terminal and computer makers. Network Computing Devices (NCD) leads the market in total X station units sold by dominating the monochrome X station business. And both Sun Microsystems and Tektronix also have products to sell.

HP's new models come with a new family name: HP ENVIZEX. Yep, HP is gradually getting away from its penchant for referring to products by mind-numbing numbers. But HP is not getting away from providing good-looking numbers. The upper end of the ENVIZEX line provides the best current performance in the market, with 165,000 Xstones, compared with competing products with scores such as 150,000 for the Tek 350; 105,000 Xstones for the Sun Classic GX and 100,000 for the NCD MCX.

HP offers nine different price points from $1,995 to $4,995, a price reduction from previous models,



says Bob Wilson, product planning manager for HP's Panacom Division (Waterloo, Ontario).

HP's X stations will work with HP MPower, the multimedia platform product. Optional multimedia features for the ENVIZEX family include CD quality audio and local scanner capability. Other options include multihost CD software management to allow multiple operating system support so each X station can be used with the operating system most appropriate to the user's needs; a 3 1/2-inch floppy drive to allow movement of data between UNIX and DOS PC environments; and adapter card support for SCSI and PCMCIA.

Meanwhile, back in the desert, we managed not to tromp on a very healthy diamondback rattlesnake. Next time I'll trade in my sneakers for some of those high cowboy boots made with real thick leather — maybe HP's workstation competitors should do the same. ■

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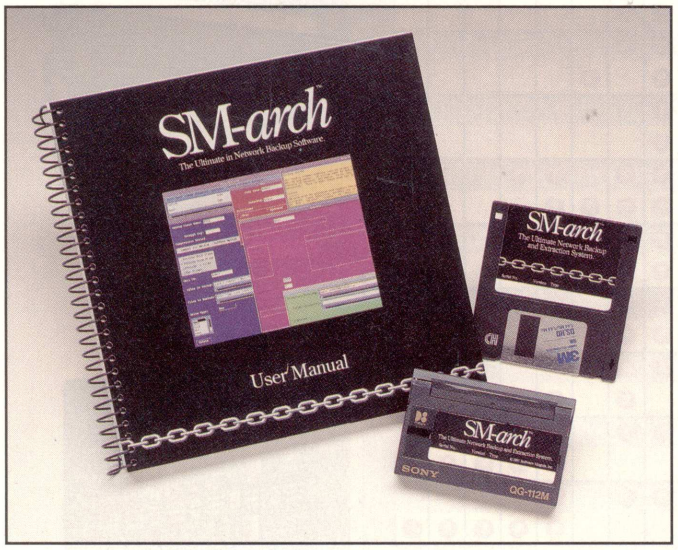

SM-arch Provides A Comprehensive Backup And Retrieval Solution For Networks

• • •

Your data is everything. Yet data protection through regular systematic backup is often the weak link in many networks. In a mainframe or minicomputer environment, the backup and retrieval problem is well-understood. Today, however, with multiple nodes from different vendors and multiple operating systems becoming more common, the backup and retrieval problem presents new challenges.

According to Vinod Gupta, president of Software Moguls (Minnetonka, Minn.), SM-*arch* is a software solution for backup and retrieval that "saves time, money and personnel, while reducing the risk of data losses in today's complex, heterogeneous networks." It gives you flexible, easy-to-use, automatic backup and point-and-shoot retrieval for every user on your network.

The SM-*arch* server runs on UNIX platforms including the HP 9000 Series 700 and 800, SUN, IBM RS/6000, Silicon Graphics, DEC Ultrix, Convex and Intel-based UNIX systems. Non-UNIX clients supported include MS-DOS, OS/2, Macintosh and VAX/VMS.

Backup devices may be attached to any UNIX node, yet are controlled by a single SM-*arch* server. Supported devices include tape and optical jukebox libraries.

SM-*arch* includes an optional interleaving (multiplexing) capability that allows simultaneous backup of multiple systems. According to Gupta, this option improves the backup throughput, especially for slower nodes such as PCs and Macs, but "unlike other backup systems, SM-*arch* does not fragment files and, thus, does not increase retrieval times."

Using SM-*arch* can be as easy as point-and-click with its Motif, Open Look and character-based formats that are identical across all supported platforms. Also, version 3.1 offers a command interface and shell scripting for integrating SM-*arch* into application systems.

To manage the backup process, you can define backup classes to include (or exclude) specific files, directories, disk partitions or all files from a particular node. Backup schedules can also be defined — immediate, daily, weekly or by specific date. Media can be pre-mounted for automatic, unattended backup.

SM-*arch* maintains a compact online catalog of backed-up files that requires only 0.5 percent of the space occupied by the data stored (based on three full backups and 10 incremental backups). SM-*arch* searches its database, locates the files, determines the media and volume, and instructs the operator to mount that volume, if necessary. Jukeboxes are handled automatically. The restore process is usually transparent to the user.

To ensure compatibility with and retrievability on other systems, SM-*arch* uses the non-proprietary, **tar**-compatible format. Even files from optionally compressed or encrypted backups can be retrieved using standard UNIX utilities. According to Yosh Kitajima of Apple Computer, the use of a non-proprietary format was a key reason behind his choice of SM-*arch* to backup networks of HP and SUN workstations.

Also of importance to Kitajima is security. SM-*arch* restricts access via passwords and allows each user to be assigned individual privileges. Only the SM-*arch* superuser can extract files belonging to other users.

Prices begin at $800 for single workstation versions and $4,000 for network versions. — *John P. Burke, HP 3000 Editor*

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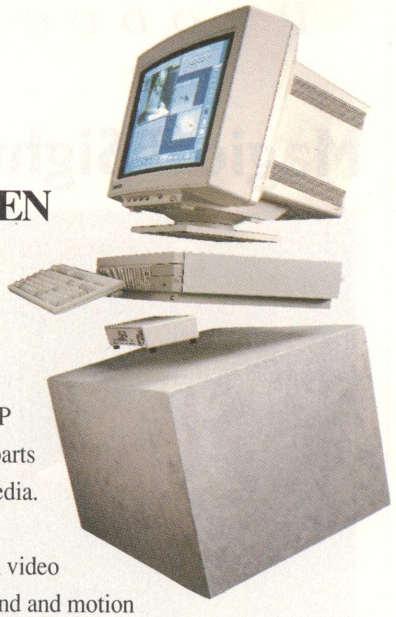

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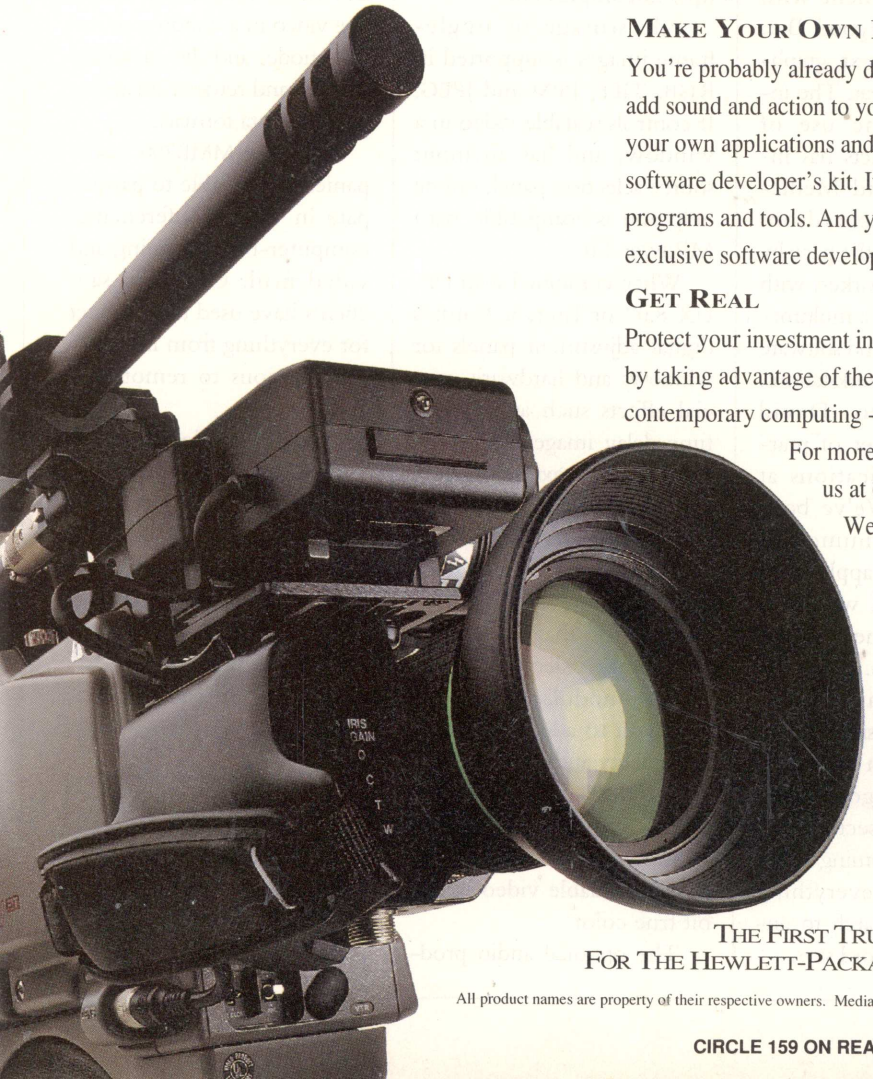

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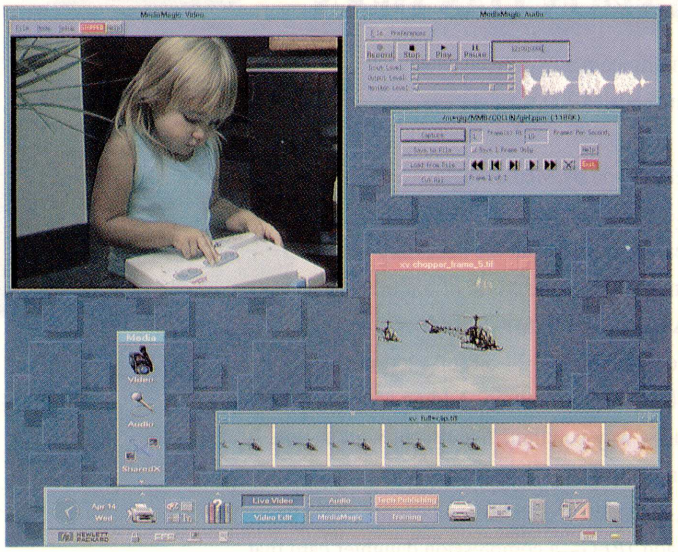

MediaMagic Provides Enhanced Multimedia Capabilities For HP Series 700 Workstations

A document with text is OK. A document with text and graphics is good. But, a document with text, graphics and audio is great. The interest in and the use of multimedia products has increased lately, and MediaMagic Inc. (Richardson, Texas) has kept up the pace by providing many markets with its MMB700 Series, a multimedia interface card and software for HP Series 700 workstations.

According to David Crawford, manager of marketing communications at MediaMagic, "We've been approached by numerous software specific application providers ... and we work with the government in defense and business.

"Another area is higher education. Universities do the majority of research and development for the goverment and the private sector, and multimedia is becoming a bigger aspect with everything from medical research to engineering," Crawford says.

The standard MMB700 configuration includes a single-slot EISA video board, RGB connection and VideoMaster application software. The video board allows HP Series 700 workstations to perform full pixel replication, support for NTSC, PAC and SECAM input formats, and color and grayscale display monitors with 1,280- x 1,024- or 1,024- x 768-pixel resolution.

With VideoMaster, a Motif 1.1 GUI, the MMB700 supports push-button image freeze and sequence grabbing at up to 15 frames per second (fps) uncompressed.

File storage of single-frame images is supported in RGB, TIFF, PPM and JPEG. It controls scalable video in a window, and has an input source selection panel, online help and is compatible with MPower 1.0.

When combined with HP-UX 8.07 or later, it features digital adjustment panels for windows and hardware, special effects such as multiple time delay images and cropping, and user extensible storage and retrieval panels for customer specific file formats. A non-GUI menu-based solution also is available with source code that controls all facets of the video.

The modular design allows you to add an optional CD-quality audio component and a JPEG (Joint Photographic Expert Group) compression daughter card for full motion scalable video in 24-bit true color.

The optional audio product includes an audio/connection box and connection cable with stereo microphone input, stereo line level input/output, stereo headphone output, and a built-in three-inch speaker. A 1 MB onboard buffer provides two minutes of voice quality audio caching.

The JPEG compression daughter card provides end-user data compression with C-cubes' CL550 image compression processor, 4 MB of video onboard caching memory and synchronized video and audio at record and playback time.

The total package permits real-time playback of audio and video from disk at 30 fps, live video in a window or native mode, and the capability to store and retrieve images in multiple data formats.

With the MMB700, companies will be able to participate in video conferencing, computer-based training and video mail. Crawford says clients have used the product for everything from in-house presentations to remote reconnaissance.

You can develop multimedia applications in a windowed X11 Motif or non- windowed environments. The Software Developers Kit contains user guide, developers manual, archive library and source & sample code, and it costs $3,995. — *Deborah Schwartz, Assistant Editor*

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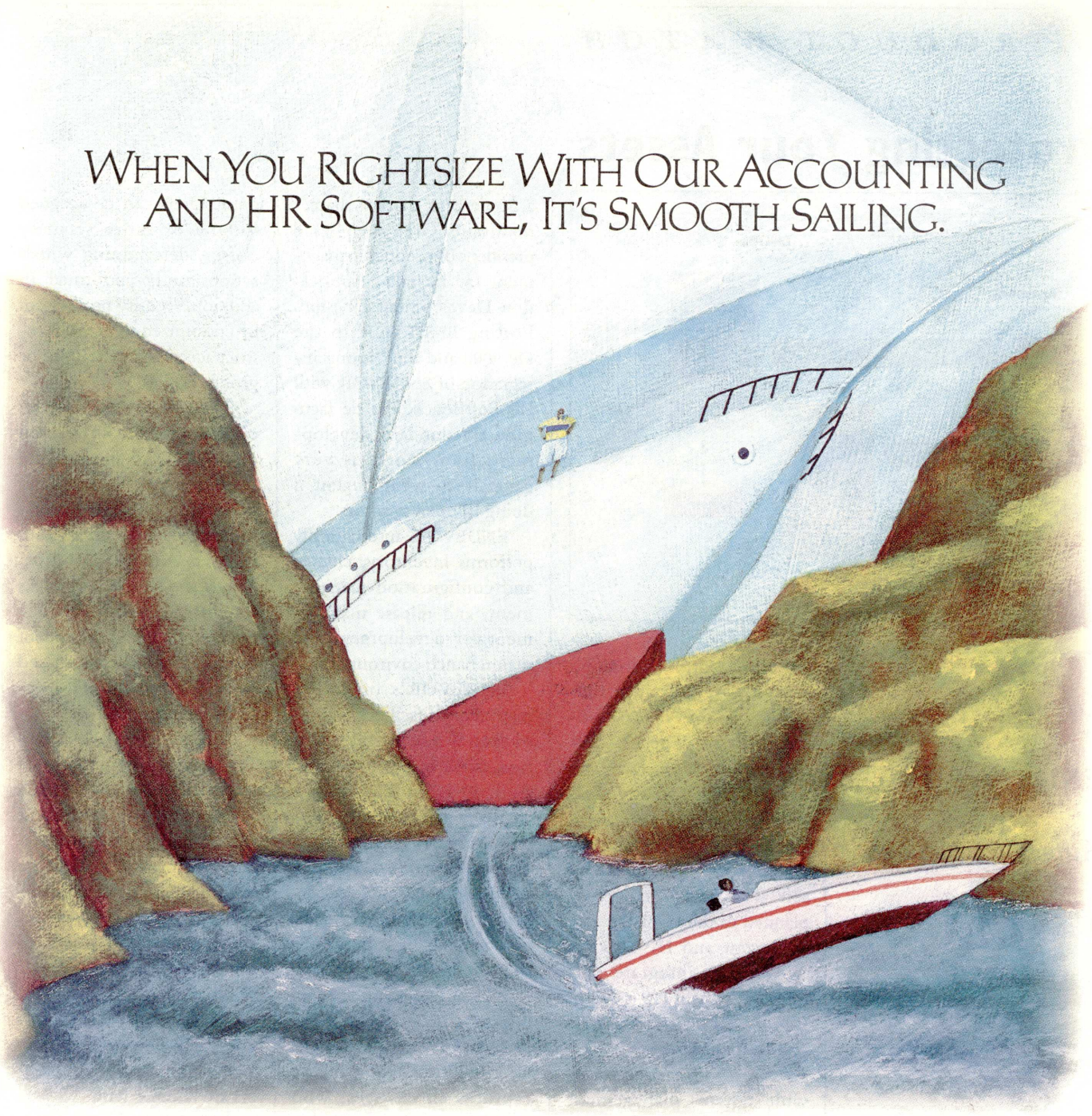

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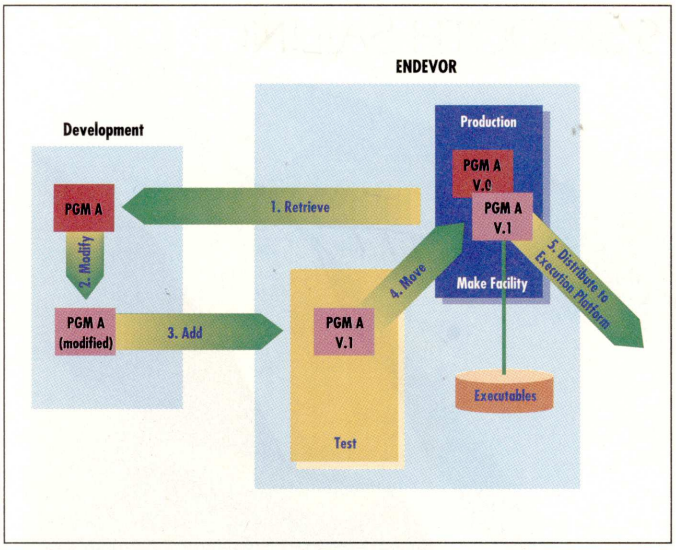

Legent Corp.'s ENDEVOR Automates Software Management

• • •

Legent Corp. (Herndon, Va.) is porting ENDEVOR to the HP 9000 running HP-UX. The ENDEVOR family of products was first developed in the mid-1980s to provide automated management and control of an organization's software assets. No port is currently planned to the HP 3000.

Legent and HP also are working to integrate ENDEVOR with HP's SoftBench. "The relationship complements Legent's strategy to provide enterprise-wide systems management solutions and expand into open systems environments where HP is a recognized leader," says Bob Yellin, Legent's chief technology officer.

ENDEVOR is one of the industry's leading applications management products. "Installed in over 1,000 sites ENDEVOR enjoys more than a 50 percent market share," maintains Greg Kee, vice president of product management for Legent's Application Development Division. Porting ENDEVOR to the HP 9000 and the "strong integration of ENDEVOR with HP SoftBench, the de facto industry-standard development framework, is very central" to what Legent is doing in open systems.

ENDEVOR automatically performs inventory, change and configuration management, and release management for development and maintenance environments.

ENDEVOR's inventory management facilities accommodate all associated application files, not just source. And, ENDEVOR is source language independent.

Automated version control is achieved for ASCII files by using a base+delta approach. Versions of binary files are kept in compressed form. In either case, the current, or any previous version, can be retrieved while minimizing storage requirements.

ENDEVOR automatically captures all changes, who made them, when and why. It controls development in a multi-user environment by allowing the user to decide if concurrent updates are allowed. ENDEVOR then provides automatic identification, merging and notification of conflicting source changes.

Extensive reporting capabilities give the user the ability to monitor software inventory and work-in-progress. Users can be assigned to one or more security classes, determining which actions can be performed. In addition, security profiles can be customized to grant or restrict access to applications or groups of files.

The ENDEVOR Make facility ensures synchronization of source and executables while minimizing resources consumed, recreating only those executables that are out of sync with their source. The Make facility also tracks the interrelationships between source and dependent modules using customized rules defining the development environment.

ENDEVOR for HP-UX is aimed at large commercial IS organizations that do much of their own development and are moving to Open Systems platforms, and the large base of UNIX application developers who need something more than standard UNIX utilities like "Make" provide.

As Kee says, "ENDEVOR goes well beyond the basic UNIX utilities that developers are familiar with."

ENDEVOR for HP-UX is scheduled for beta testing in the first half of 1994. — *John P. Burke, HP 3000 Editor*

Legent Corp.
575 Herndon Pkwy.
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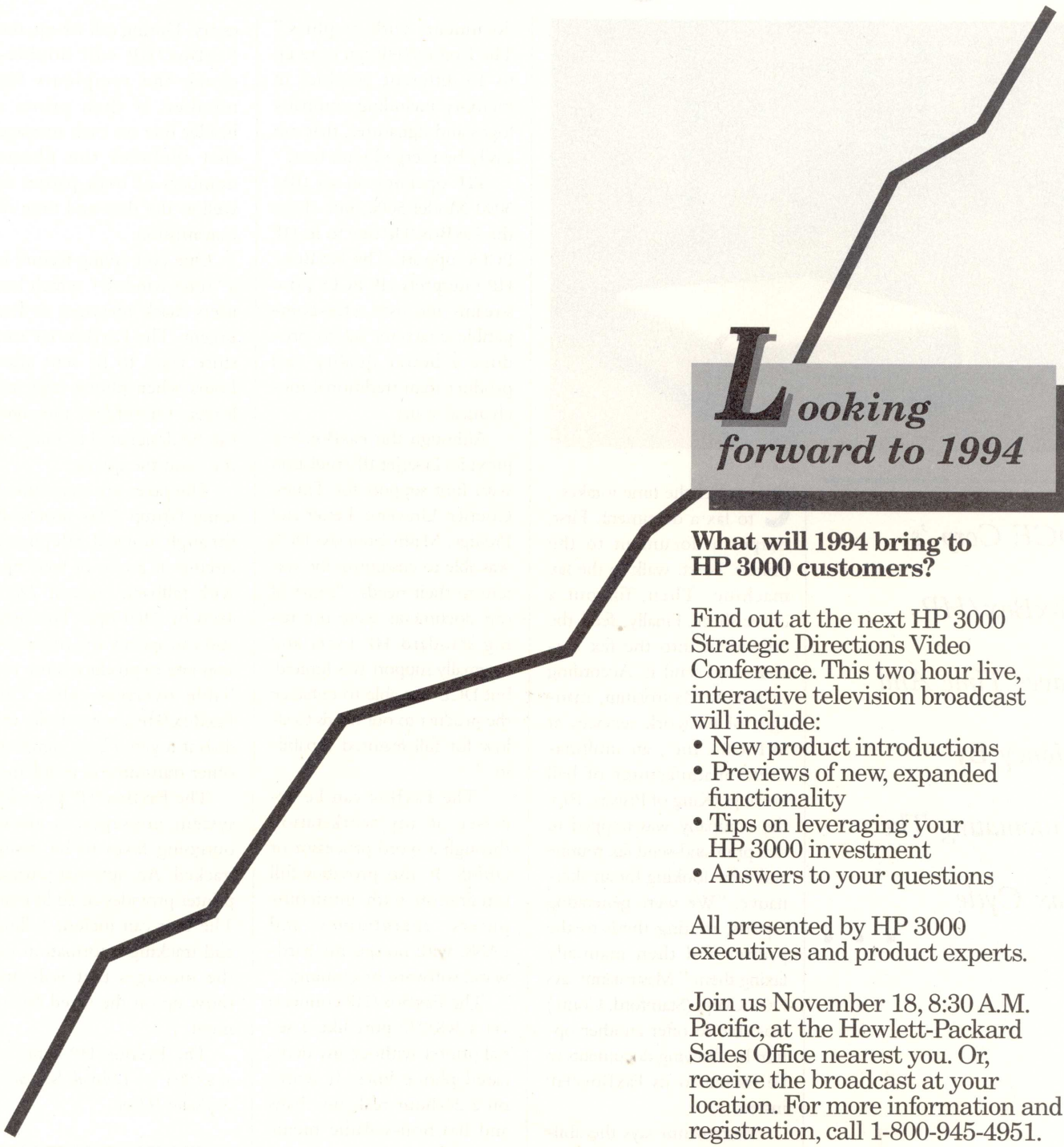
HP 3000 Strategic Directions



Looking forward to 1994

What will 1994 bring to HP 3000 customers?

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- New product introductions
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Get Your Fax Straight

DCE Corp.'s FaxBox/HP Saves Time And Money By Automating The Fax Cycle

Consider the time it takes to fax a document. First, output a document to the printer. Next, walk to the fax machine. Then, fill out a cover sheet. Finally, feed the document into the fax machine and send it. According to Joseph Mastroianni, manager of network services at SKF USA Inc., an multinational manufacturer of ball bearings (King of Prussia, Pa.), the company was trapped in that print-and-send fax routine and were looking for an alternative. "We were generating reports, routing them to the printer and then manually faxing them." Mastroianni says DCE Corp. (Stamford, Conn.) was able to offer another option by allowing documents to be routed to its FaxBox/HP instead.

Mastroianni says the ability to fax many different company forms such as invoices and purchase orders was a must. "We need a solution not just for text documents, but also complete documents with graphics." The FaxBox/HP can store up to 10 different graphics in memory including company logos and signatures, that can easily be merged with text.

SKF operates on an IBM 3090 Model 500e, but chose the FaxBox/HP due to its HP PCL5 support. The FaxBox/HP interprets HP PCL5 print streams and uses a fax-compatible character set to produce a better quality end product than traditional mechanical scans.

Although the FaxBox/HP provides LaserJet III emulation with font support for Times, Courier, Universe, Letter and Prestige, Mastroianni says DCE was able to customize the system to their needs. "Some of our documents were not using standard HP fonts and originally support was limited, but DCE was able to enhance the product to our needs to allow for full-featured capability."

The FaxBox can be accessed at any workstation through a word processor or DBMS. It also provides full integration with minicomputers, mainframes and LANs, with no specific hardware, software or training.

The FaxBox/HP connects via a RS/232 port like a serial printer without any dedicated phone lines. It works on a 24-hour real-time basis and has non-volatile memory to protect message and system configurations. Incoming calls are routed to the host or locally attached to the printer as specified.

No cover pages are necessary. During call set-up, the FaxBox/HP will double-check the recipients fax number; it then prints a header line on each message that includes the phone numbers of both parties as well as the date and time of transmission.

One cost saving feature is a "time window" which lets users mark messages as less urgent. The FaxBox/HP can store faxes to be sent after hours when phone rates are lower. Or, urgent messages can be designated to jump to the front the queue.

The faxes are transmitted using Group 3 fax protocols through normal telephone circuits at a rate of 9600 bps with fallback rates of 7200, 4800 or 2400 bps. The user also can specify the transmission rate to produce more reliable overseas calls. The FaxBox/HP automatically redials if it gets a busy signal or other transmission problems.

The FaxBox/HP provides system messages to allow outgoing faxes to be easily tracked. An optional journal printer provides an audit trail. The user can include billing and tracking information on the messages that will not show up on the faxed document.

The FaxBox/HP is priced at $3,995. — *Deborah Schwartz, Assistant Editor*

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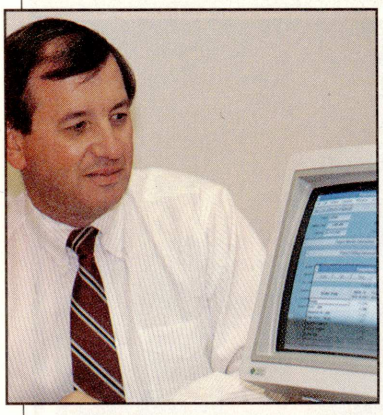
Heading For The Open Road

Smith, Dennis & Gaylord and Their Clients Count On Open Systems



"We see the future as being in the open systems world."

Don Gaylord
Director of Business Development
Smith, Dennis & Gaylord Inc.

In the exorable march toward open computing systems, no vendors or customers will remain unscathed. Some vendors and their customers will likely drag each other — kicking and screaming — down that open road.

The fortunate companies and their vendors however, will move forward diplomatically finding a balance somewhere between open systems on one hand, and open warfare on the other. Smith, Dennis & Gaylord (SD&G; Santa Clara, Calif.) has positioned itself to be one of the fortunate vendors, so too then are their HP 3000 customers.

At a time when the term "open systems" seems to be synonymous with UNIX operating systems and several competing RDBMSs, SD&G provides another alternative. "There are many closed back-end [databases] like Sybase, Informix and Oracle. We see that as a mistake," says Don Gaylord, SD&G's director of business development.

For HP 3000 customers contemplating a move to open systems, SD&G provides Visual/XL, a client-server application written specifically for HP 3000 Series 900 systems. Visual/XL is a new generation of SD&G's Business/XL, their HP 3000-based project accounting system that provides users with the ability to access financial information and take advantage of "drill down" summaries via a Microsoft Windows interface on PC clients. The processing takes place on both the PC-based client and the HP 3000 server.

Visual/XL was designed with Microsoft's Visual Basic, a GUI development tool. "We can get people up and productive very quickly, much more quickly, with that tool," says Jon Witty, SD&G's director of sales and marketing. "With Visual Basic and Windows, there are no PC-based special packages or run-time libraries. We can pool the resources of a tremendous base of people who didn't get involved with accounting information before."

Although Visual/XL has been available to SD&G customers for about one year, software development efforts actually started about two years ago when HP decided to use the Precision architecture for the HP 3000. "We went to our installed base early on and we collected their thoughts and ideas," says Witty. "It was a cooperative process." However, Gaylord stresses that some education also was required.

Besides the usual prototypes, two video presentations explaining their client-server technology were sent out to prospective clients. "Within six months, 75 percent of our HP customers were committed to Visual/XL," says Gaylord.

In the future, Witty says SD&G intends to continue working cooperatively with their customers within an "HP 3000 solution environment."

"We are equally hard at work, finishing up a UNIX product, which will expand our market opportunities significantly. Ultimately, we will modularize our solution to the point where we can embrace new and emerging technology."

SD&G, an employee-owned company, has been providing project accounting solutions for the HP 3000 platform (MPE and MPE/iX) since 1973, claiming over 175 HP 3000 sites and about 30 Tandem installations (in larger networked enterprises). "The solutions market [project accounting] we sell into has very few competitors," says Gaylord. "There is no competitor that can step up to the bar to provide an open systems solution [like ours]."

Gaylord is excited about the prospects: "From a software company perspective as well as [in terms of] the market demand, the solution is as much independence as possible — hardware, network and database. We see the future as being in the open systems world."— *George A. Thompson, Technical Editor*

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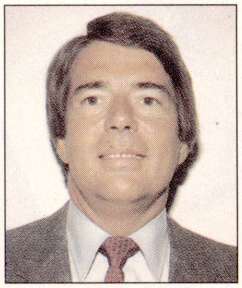

"If a customer can get his Cobol code into a format that will run on any computer, it puts tremendous buying power into his hands."

Bill Fried
Executive Vice President
Acucobol Inc.

In the technological march toward downsizing and open systems, there is one formidable obstacle blocking the path: legacy Cobol code. Bill Fried, executive vice president, Acucobol Inc. (San Diego, Calif.), estimates that 80 percent of all the world's code today is Cobol. About 70 billion lines of Cobol go into production every night in the U.S., and about 50 percent of all new software development is still done in Cobol.

Consequently, the owners of Cobol applications running on aging proprietary hardware, face a dilemma. To take advantage of the price-performance gains in hardware, they have to port their applications to new platforms, including UNIX.

According to Fried, Drake Coker, the president and co-founder of Acucobol, foresaw this dilemma. "Coker believed that by the year 2000, 20 percent of all systems would be UNIX-based," Fried says. "Hardware would become a commodity and open systems would prevail." The problem, says Fried, is that all the existing Cobol code can't be re-written. The job is too massive and too expensive.

"Although a lot of developers will start writing new code in new languages," Fried says, "a lot of Cobol programmers will be unwilling, or unable, to make that transition." The goal Coker set for himself, was to create the "world's most portable compiler." Instead of taking six months and a half million dollars to port applications, Coker's compiler would do it in hours.

"Cobol is not going to go away in our lifetime," Fried says. "But why scrap the investment in legacy Cobol applications if there's no good reason to? There's a better return on investment if you can modernize those Cobol applications, and convert them into a machine independent format, able to run on the fast new platforms."

The result was the Acucobol 85 compiler. Now in its second version, Acucobol 85 has been supplemented by Acu4GL, a Cobol-to-SQL translator, and AcuView, an interactive business graphics package for Cobol applications software. According to Fried, Acucobol 85 is the only Cobol compiler to enable one set of source code to run on over 600 platforms. This portability is the principle objective of open systems, and a major advantage to organizations.

According to Ron Content, president of Raconix (Mississauga, Ontario), a software re-engineering service, one example is V Crest Systems (Auburn Hills, Mich.), a subsidiary of Volkswagen of America. A developer of auto dealership applications, V Crest initially developed for the IBM S/36; then migrated their applications to the IBM AS/400, runing in S/36 emulation mode.

Volkswagen Mexico, a potential V Crest customer, wanted the V Crest application, but not the AS/400. The problem was porting the application to an acceptable platform, Content says. Raconix, in a partnership with HP, converted the software to HP-UX within a week using Acucobol 85. The V Crest software now runs on HP 9000 model 817s in over 200 locations in Mexico.

"We re-engineered IBM's Cobol 74, with its command language, screens, utilities, etc., and gave V Crest the equivalent application in ANSI standard, POSIX-compliant, native UNIX," Content says. "We chose Acucobol as a compiler because it was the most open of the alternatives, and because, if I needed answers quickly, with one phone call I could talk to the person in charge of development."

Content points out that V Crest customers can now choose a hardware independent solution that runs on all major platforms.

The bottom line, according to Fried, is that machine independent software puts the end user in the driver's seat. "If a customer can get his Cobol code into a format that will run on any computer, it puts tremendous buying power into his the hands." — *Sam Dickey, Contributing Editor*

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Getting Down To Business

Comshare Makes The Transition From EIS to Managerial Applications

"A new category of managerial applications has arisen at the confluence of two product classes — transaction accounting systems and personal productivity tools."

Richard Crandall
President & CEO
Comshare Inc.

Change. Some companies pathologically resist it, and regrettably watch their fortunes sink faster than you can say "rightsizing"; other companies welcome and embrace it, and live to tell about it. Comshare Inc. (Ann Arbor, Mich.) is among the latter. Orginally founded in 1966 as a mainframe time-sharing company, Comshare eventually pioneered and succeeded in establishing the Executive Information System (EIS) market.

Since introducing its Commander EIS product in 1987, Comshare has been "sensing the need for change" and adapting its business strategy in response to the information industry's move toward the client-server model of computing. According to Richard Crandall, Comshare's president and CEO, "there's been a transition from decision support systems to EIS [and now] to business intelligence applications."

But change, as many other companies have discovered, does not necessarily come easy, even when you plan for it. Since 1991, Comshare has been in the process of a difficult company restructuring. Reported revenues for 1993 ($105.2 million) declined 13 percent from 1992 ($119.2 million). And Comshare reduced its employee count by 100 during the year. Nevertheless, the company is still the 32nd largest independent sofware vendor, worldwide.

Crandall explains that the industry and Comshare have been through several transitions. After transaction accounting systems proved to be irrelevant for managers to glean significant insights about their businesses, "EIS was able to deliver value to the high-level manager and executive. Then two years ago, GUI front-ends and middle ware databases became the avant-garde tools to use [for decision support]." Personal productivity tools (like spreadsheets) also proved insufficient over time.

Comshare aims to fill in the gap with products like Commander FDC, a financial consolidation program; and Commander Prism, a multidimensional spreadsheet similar to Lotus' Improv — in addition to Commander EIS, its flaship product, which still commands a 50 percent market share according to IDC.

Referring to Comshare's new strategic focus, Crandall says, "We are becoming a new kind of applications vendor, not one based on transactional accounting systems but rather managerial and business intelligence. Users want real solutions for their mission critical applications — they have to get it right the first time."

Comshare is positioning its products between traditional transaction-oriented vendors like ASK, Dun & Bradstreet, Oracle and SAP, and those vendors selling data access and productivity tools like Aldus, Borland, IBM, Lotus, Microsoft, SPC and WordPerfect.

Among its competitors, most notably Pilot Corp., Comshare is the only $100 million vendor in software sales. Crandall stresses that Comshare doesn't sell turnkey systems, "we are more like a systems integrator. Twenty percent of our revenue is from professional services."

Having been through its own transition from a mainframe to client-server vendor, Comshare wants to help other companies tangled in the administrative complexity of client-server computing. Crandall says,"We want to help others provide insights into the way they conduct their business. — *George A. Thompson, Technical Editor*

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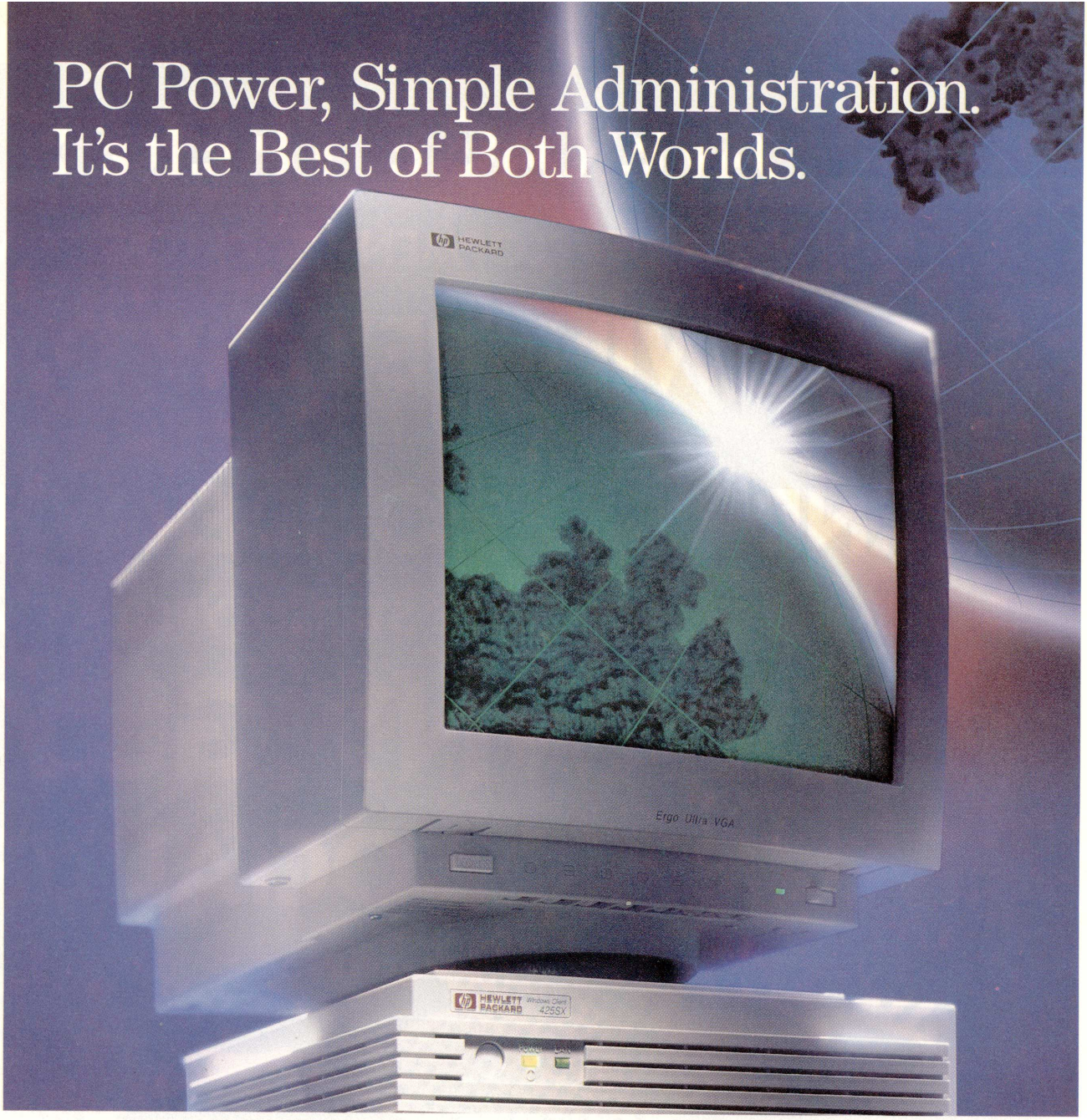

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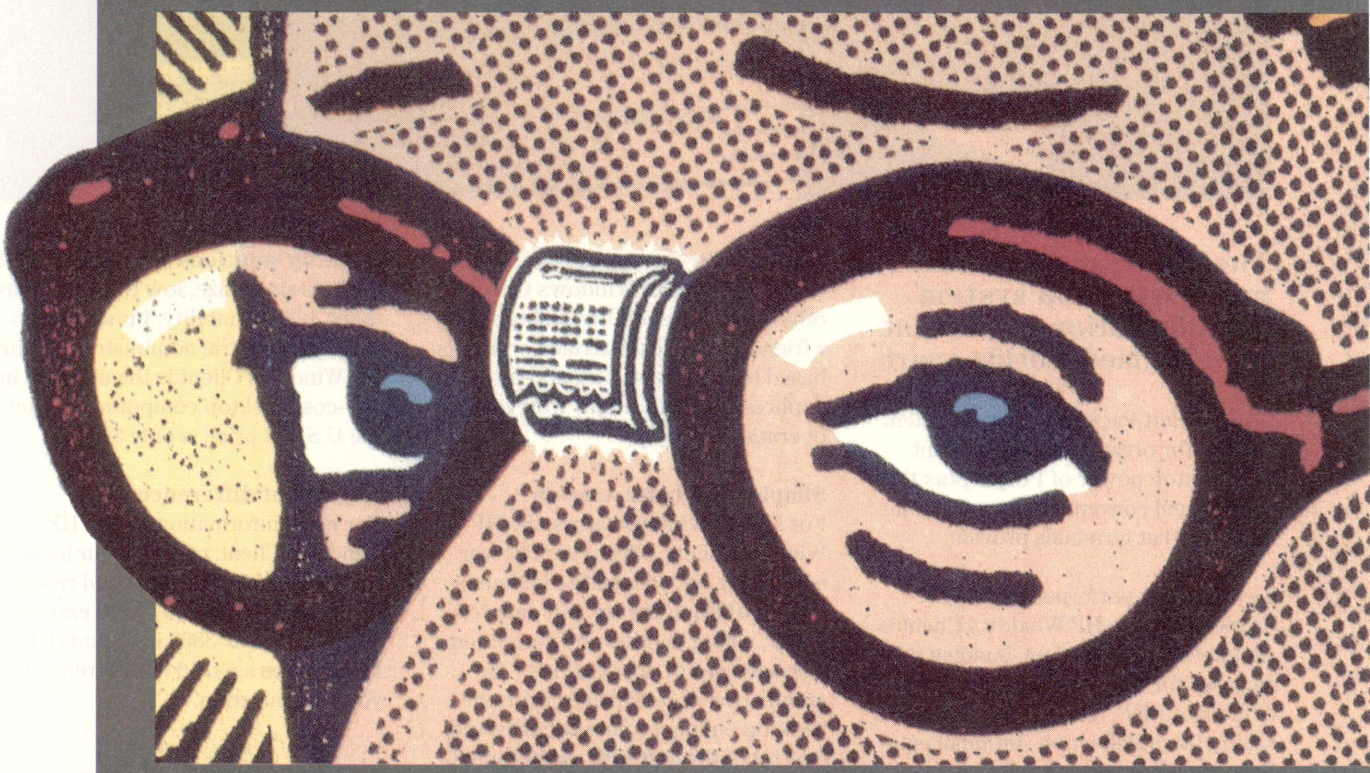

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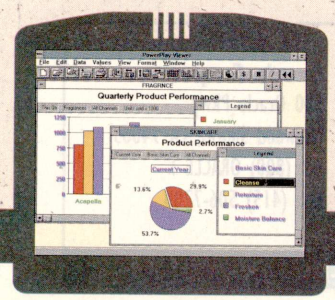

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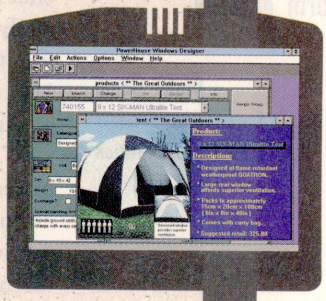

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A European Alliance

HP and Oracle Boost UNIX Revenues Through Strategic Partnership

"UNIX is our number one operating environment and HP-UX is our top selling UNIX platform globally."

Ronald Indech
Senior Product Line Manager
Oracle's HP Product Division

The importance of Oracle Corp. to HP as a strategic partner in Europe has been reflected brilliantly in recent weeks. "Specifically," says Sean Bandarkar, Oracle director of HP product marketing, "HP-UX revenues, which are bundled into total UNIX revenues and not released separately, were greater in 1993 than Oracle's VMS revenues of $111 million."

At the end of fiscal year 1993 on May 31, Oracle reported that Europe accounted for half of its HP product line revenue. Furthermore, "HP-UX finished fiscal year 1993 as Oracle's largest product line," the company declared.

HP and Oracle expected to sign an agreement in Europe in September in which they officially agreed to jointly market Oracle's applications on HP platforms. "It's been in practice for months now, this is just the formalization," says Julian Garrett, Oracle's European applications director in Bracknell, U.K.

Without a doubt, the synergy between Oracle and HP in the system and applications software businesses, lies in UNIX. Although the exact percentage of Oracle's revenue captured by HP-UX was not available, UNIX platforms, including Sun, IBM, HP and DEC, represented 69 percent of Oracle's total 1993 revenues of $1.5 billion. "UNIX is our number one operating environment and HP-UX is our top selling UNIX platform globally and has been so for a number of quarters," says Ronald Indech, Oracle's senior product line manager at Oracle's HP products division in Redwood Shores, Calif.

Europe is no exception, says Gilles Lunzenfichter, HP channel account manager for Oracle France. "Our premier source of UNIX revenue is HP and has always been, because HP was the first serious promoter of UNIX. The reason we work well with HP is our common UNIX focus."

In Germany, HP platforms led by HP-UX, have captured 20 percent of Oracle Germany's license revenue, says Saki Koliopolis, Oracle's HP channel account manager in Munich. "This represents a 20 percent to 25 percent increase over 1992," he says. In Oracle's relatively new applications business, as well, UNIX is the edge, which makes HP a formidable partner.

Worldwide, 80 percent of Oracle's 1992 applications revenue came from UNIX, says Lunzenfichter, adding that HP-UX is the leading applications platform, with 19 percent. In France, he notes, the preference for UNIX applications and HP-UX, in particular, is even more pronounced — 95 percent of applications revenue is from UNIX and 31 percent of those sales specify HP-UX. "Our first application clients in France were on HP platforms," he says.

At the end of March 1993, HP-UX accounted for 21 percent of Oracle's European application sites, including the U.K., which represents sales over the last five years says Garrett. If the U.K. is excluded, HP-UX represents 32.5 percent of the overall number of applications installed. He says the second figure is more exciting for HP because it shows a high preference for the platform in a customer base that has grown only for the last few years.

The base of HP-UX/Oracle applications customers in Europe already includes Chanel, Elf Aquitaine, and DHL Europe.

And, an increased customer base is expected in two markets that were once Blue domains, says Nils Soelberg, HP's Oracle account manager for Europe, in Boeblingen, Germany. "The government and telecom businesses are switching over to the functionality of Oracle and HP. Telecom is a new business for Oracle and HP because it has been dominated by IBM mainframes," he says.

Of the synergy between the companies, he says, "We have a common strategy of open systems, so there's no conflict of interest when we talk about client-server and open systems." —*Marsha Johnston, International Editor.*

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Factory Floor Re-Formed

Manufacturing Software Refines The Production Cycle Through Departmental Integration

In the old days, a new Chrysler car reached the market after a gestation period of about four years. The Dodge Viper, introduced not long ago, slashed this by 25 percent, reaching the market in only three years. Roy Sjoberg, Chrysler executive engineer for the Viper project, says other cars now in the works will cut this by even more. What's making the difference? Manufacturing software.

Manufacturing departments around the world have been throwing computer hardware, automated spot welders and other grand schemes at their processes for years. They've made solid gains by reducing costs, parts counts and reliability problems. But some of the biggest gains have yet to be realized by many companies — for example, the benefits of integrating multidepartmental processes minimize the amount of rework, data reentry and just plain wasted effort that limits productivity in discrete or process manufacturing.

Not to worry. Solving these problems is a great way for software vendors to make a profit, so a number of happy helpers are stepping up to the challenge. In a marketplace where the only solution used to be to invent your own software, the majority of firms are now able to snatch packages off the shelf.

Plant-wide Research (North Billerica, Mass.) compiled num-

BY BILL SHARP

bers for the 1993 *Manufacturing Systems* magazine's Software Top 50 ranking, and reported that packaged software will grow at some 14 percent this year. *Manufacturing Systems* also notes that even though HP officially is pushing third-party standards-based solutions over its own manufacturing software, HP still ranks third in the manufacturing software market, behind IBM and Computervision. But more importantly, a glance down the list of the top-selling manufacturing software firms shows that the majority of the off-the-shelf manufacturing software products now are available on HP systems.

That's not to say that inventing your own software might not still pay handsomely. Just ask Sjoberg at Chrysler — cutting a year off the delivery time for the Viper has to feel like quite an accomplishment in a U.S. industry known recently for the business it gives away rather than for what it takes.

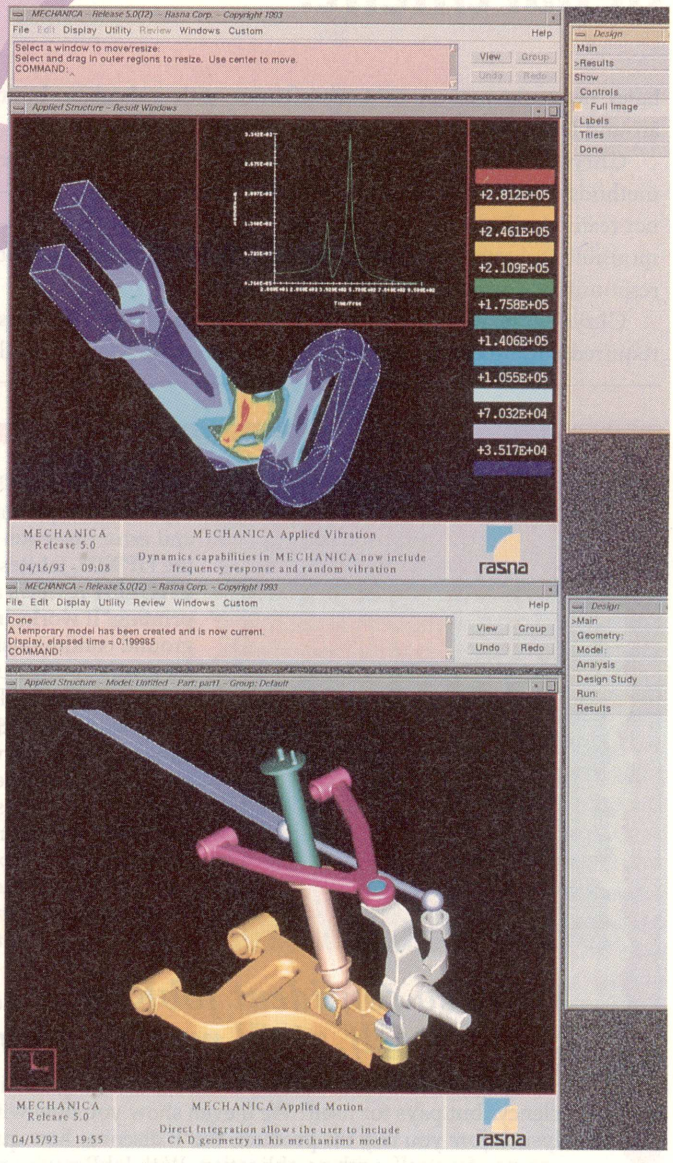
A unified database was the secret weapon for Chrysler. Before the change, says Sjoberg, manufacturing, MIS, finance, engineering, sales and marketing each had their own databases. Some were secured against data transfer and all were jealously guarded by the rulers of the fiefdoms who promote and protect the status quo in the corporate hierarchy. Unfortunately, such protective data organization also crippled corporate productivity.

"There were at least five or six separate databases that for alleged security reasons were not accessible to each other," says Sjoberg. "You had to download data and then reload it onto another system."

This was particularly damaging when it came time to resolve problems that emerged with new car prototypes. Because different departments were using separate databases, lists of problems could only be prioritized within the list itself, not in comparison with problems from other departments.

"That produced an interesting phenomenon," recalls Sjoberg. "With past systems you might count 83 problems, with no clear priority to help choose which to solve — you had 83 problems of equal importance. Now on the Viper program with a single database and priorities based on the customer point of view, we can do what is smart for the customer. We may write off 10 or 15 problems that won't be seen by or matter to the customer." Consequently, better cars reach the market faster, with reduced costs.

Chrysler uses HP systems to control a variety of communications, engineering and graphics functions. The unified data-



Applied Vibration and Direct Geometric Access readings produced by Mechanica 5 from Rasna Corp.

Each worker, is responsible for correcting their own data not the MIS department.

bases presently run on IBM mainframes with a database built around DB2.

Chrysler's Tracy Johnson, manager of product database methods, says the merging of old vertical functions into a product team also has been part of the solution. Each worker is responsible for correcting their own data, rather than giving that responsibility to a central MIS department.

Chrysler's massive effort to pull together multiple databases required extensive custom work on a large scale. More typical of multi-integration work is the experience of electronics manufacturer Talla-Com Industries Inc. (Tallahassee, Fla.). In this case, the user brought together several off-the-shelf products and made them work together.

Jeffrey Widel, a systems analyst with the MIS department of Talla-Com, helped develop a sophisticated multi-integrated system using software from multiple vendors to link hardware from multiple vendors. The company's automated circuit board assembly systems include a leased line connection to an IBM 3090 in Detroit running Cullinet MRP software, which linked to a DEC VAX 8350 running office automation software in the Tallahassee plant.

Factory control functions are shared by a VAX 8350, a VAX 4200 running financial and Lotus software, and an HP 9000/832 running production and quality control software. On the factory floor, a VAX 3100 controls auto insertion, an HP 9000/825 runs real-time process control and data collection software, and an IBM RS/6000 model 520 runs CADAM and P-CAD software.

Talla-Com uses DELTA factory-wide information system from Cimflex Teknowledge Corp. (Palo Alto, Calif.) running on the HP 9000 systems. DELTA has links to an ORACLE RDBMS, the Cullinet MRP system and to SDRC Corp.'s engi-

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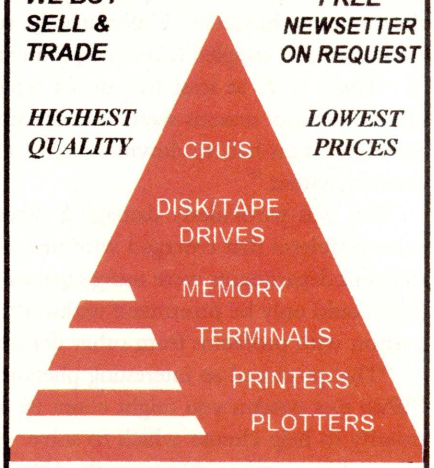

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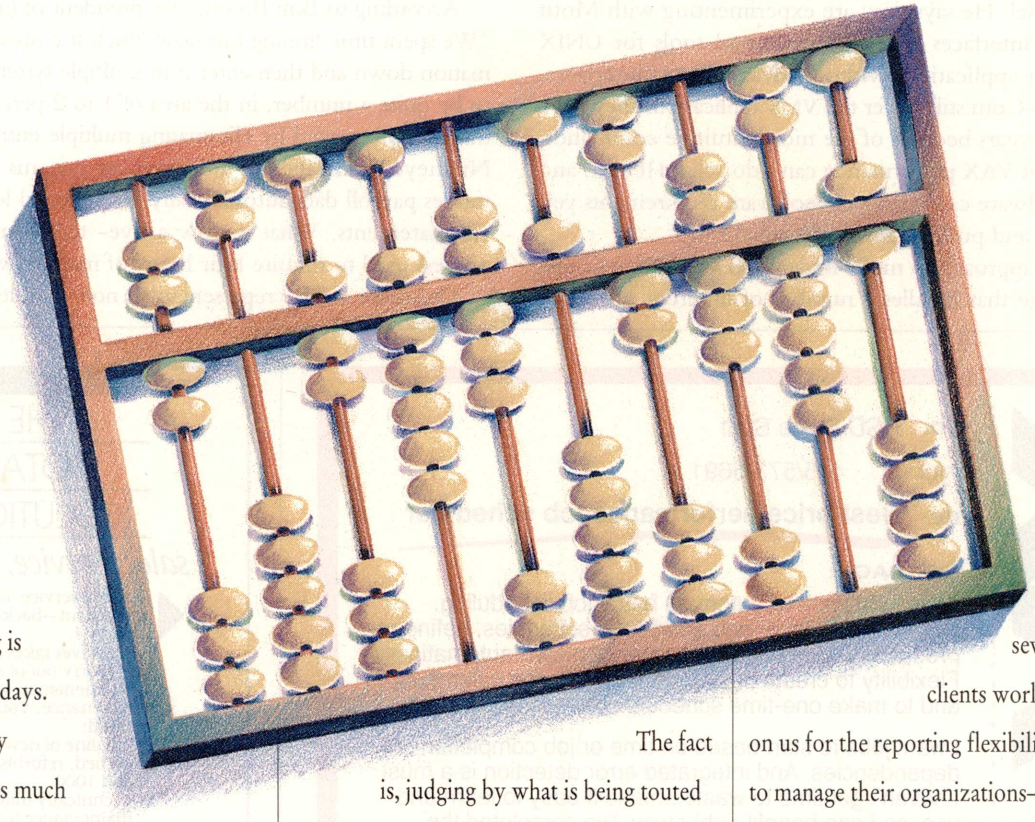

It seems flexible reporting is all the rage these days.

Which really shouldn't come as much of a surprise. After all, one of the fundamental reasons for investing in business software is to get your hands on the information you need to better manage your business.

However, ask most software vendors to show you what they mean by flexible reporting, and *you could be in for quite a surprise.*

The fact is, judging by what is being touted as flexible reporting, there seems to be quite a difference of opinion regarding just what you should expect.

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neering software. Thick Ethernet links the systems using Wollongong TCP/IP and NFS software.

Not only is board assembly automated, says Widel, but the boards themselves carry bar codes that enable the system to track each board by serial number as it is produced. "We track that serial number all the way through to the back door," says Widel. "Once a board is shipped, we automatically archive all the data on its assembly to an HP workstation using optical storage. We archive that 'as built' data for seven years." Stored data on each board also includes functional test results from HP test equipment, as well as statistical analyses of the data.

"We're porting a lot of CIM software over to the HP hardware," says Widel. He says they are experimenting with Motif and other user interfaces to use as front-end tools for UNIX applications. For applications without advanced user interfaces, workers at Talla-Com still prefer the VMS applications they have used for several years because of the more intuitive commands, says Widel. "But VAX performance can't do what HP can, and DEC Alpha hardware can't meet our software requirements yet. We're growing and pushing more toward HP."

Still another approach to multi-integration is to move to one software package that handles a number of different manufacturing management tasks for one product. This is the approach taken by valve manufacturer Groth Corp. (Houston, Texas). The firm moved from a collection of different solutions that did not integrate well, including an in-house custom application, a manufacturing system and a database product. They replaced these with MANMAN/X from The ASK Group Inc. (Mountain View, Calif.). MANMAN/X supports three different databases and functions on a number of different platforms, including MPE/iX and HP-UX. The software includes 27 modules which cover planning and costing, engineering control, inventory, shop floor control, sales management, purchasing, finance, customer service and maintenance.

According to Bob Bacon, vice president of finance for Groth, "We spent time finding out how much it costs us to write information down and then enter it in multiple systems. It turned out to be quite a number, in the area of 1 to 2 percent of gross sales that could be saved by eliminating multiple entry of data." Matt Niemeyer, manager of information systems at Groth, now moves payroll data automatically into general ledger and financial statements. What is now a five- to 10-minute automatic process used to require four hours of manual work.

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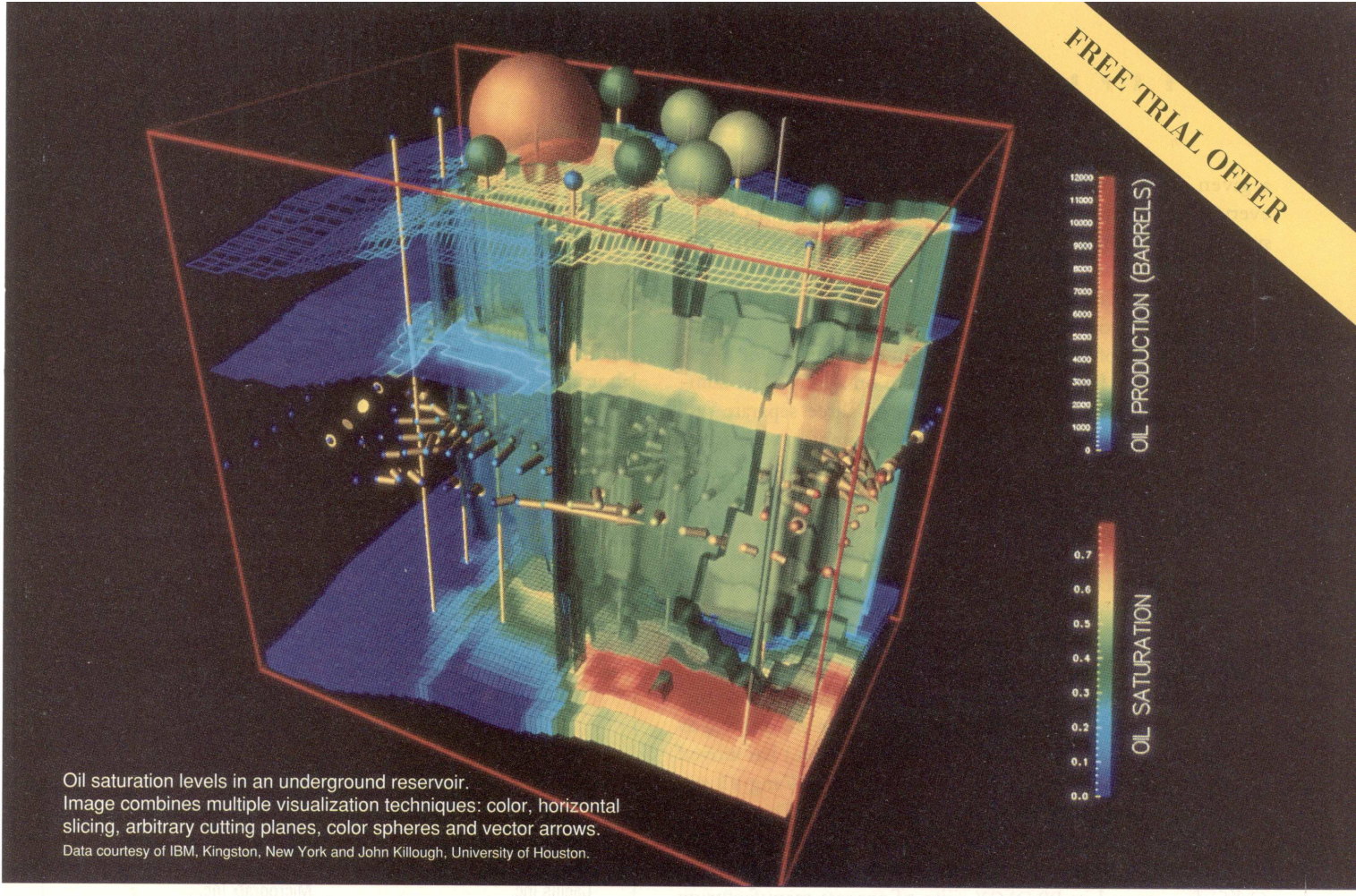

Oil saturation levels in an underground reservoir.
Image combines multiple visualization techniques: color, horizontal slicing, arbitrary cutting planes, color spheres and vector arrows.
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a given customer and that customer's order. This includes everything from providing a quote or entering an order in the system, to tracking the order to ensure its prompt delivery. The user of a particular type of data now has ownership of, and responsibility for, that data.

Groth went from a system of three minicomputers with PCs on desktops, all of which were not connected, to an HP 9000/867 with the PCs linked to the HP system on a LAN. The company went from 50 simultaneous users on three separate systems to 130 simultaneous users on the HP computer, with access to spreadsheets, communications software and E-mail.

Another vendor offering integrated manufacturing software solution for both HP-UX and MPE/iX is Datalogix International Inc. (Valhalla, N.Y.). Datalogix markets both CIMPRO and Global Enterprise Manufacturing Management System (GEMMS) for the process management industry. Users of this software include Coca-Cola Foods, Heinz Pet Products, Merck, Sherwin-Williams and 3M.

HP's success in the manufacturing industry has not gone unnoticed. More manufacturing software products are moving to HP operating systems. Caelus Inc. (Spokane, Wash.) has moved its Caelus Management System (CMS) from the Wang VS environment to HP-UX. CMS is used at places such as Detroit Diesel and Ingersoll-Rand for real-time, plant-wide manufacturing planning and control. Also, Ross Systems Inc. (Redwood City, Calif.) has moved its PROMIX suite of process manufacturing products to HP-UX and MPE/iX.

In addition to the firms providing broad-based manufacturing solutions, there are also products providing more vertical approaches. There are many products that fall into this category. A sampling of them includes:

- Artemis project management software from Lucas Management Systems (formerly Metier Management Systems).
- ABC Flowcharter and Designer 4.0 software from Micrografx Inc.
- Red Brick Warehouse 2.0, a data warehousing RDBMS for enterprise-scale data applications from Red Brick Systems.
- Anvil-5000 CADD/CAM/CAE software from Manufacturing and Consulting Services (MCS).
- Mechanica 5 mechanical design synthesis software, which runs on Convex systems using PA-RISC from Rasna Corp.
- Euclid 3 CAD/CAM/CAE software from Matra Datavision.
- JOBSHOP/3000 from Votaw Data Systems caters to small to medium-sized firms that need to track costs by job, project or labor intensive operation.

So the next time a Dodge Viper flashes past you, brace yourself for the sonic boom and remember that a good portion of what just left you behind was the result of manufacturing software.

HP's Manufacturing Workstations

HP's newest additions to the hardware side of manufacturing are its high-end industrial workstations introduced this fall. These are toughened versions of the series 700 workstations, built to tolerate higher humidity, shock and vibration than their commercial cousins.

A 50-MHz PA-RISC version was the fastest available until this latest introduction, which brought out a 100-MHz edition. The new model includes 256 KB of cache and 256 MB of RAM, and VME in addition to EISA. The system can run either HP-UX or HP's real-time operating system based on Lynx-OS.

These systems are intended for demanding data acquisition, control and display applications in less than cushy environments. Entry price for the new wicked fast industrial editions is $24,790.

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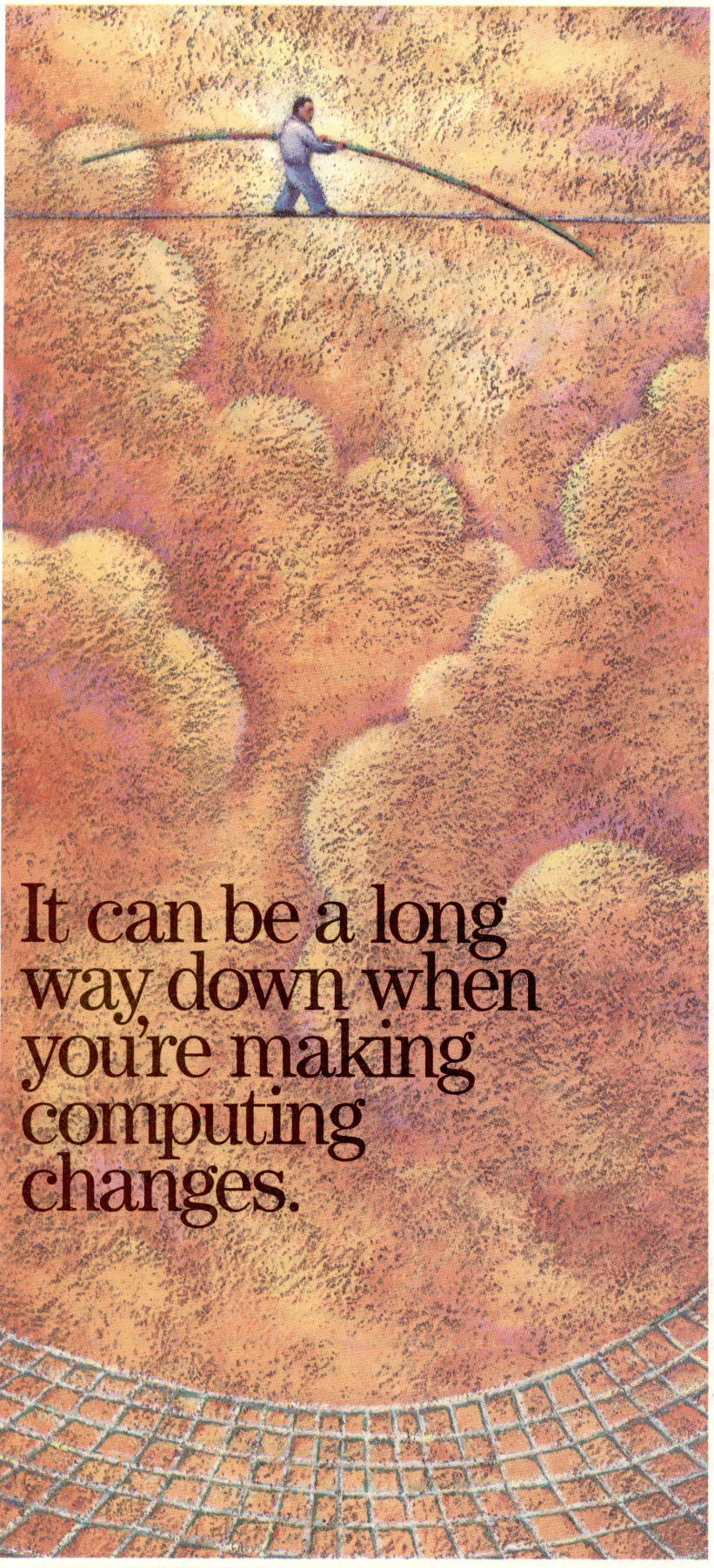

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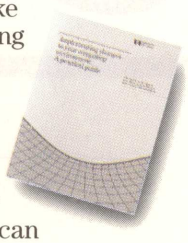

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Go Figure

Are you among those who think client-server computing is someone else's problem? Better think again. Formerly, in the rarefied atmosphere of air-conditioned rooms, the glass-house gangs and their mainframe vendors ruled with proprietary authority. Life was simpler then: A single mainframe. A single monolithic solution.

But in the brave, new, "open" world of client-server computing, both MIS and vendors are learning to adapt to multiple platforms and multiple solutions. For evidence, search no further than your own host-based financial and accounting software applications.

Within the Fortune 1,000, according to a report by Forrester Research (Cambridge, Mass.), over the next three years, financial and accounting systems will be among the first suite of applications to be leaving the secure confines of their host-based systems and heading for the wide open spaces of client-server platforms. "It's not all that surprising, after all, [corporate] financial applications was the first area to be automated on mainframes," says Heidi Dix, one of the author's of the Forrester report.

However, technology often evolves much faster than markets or mainframe legacies. IS managers "still concerned about high transaction volumes will keep their mainframe for security and systems management reasons," says Dix. For vendors, "supporting an unfamiliar technology will be a problem at first." But no matter which side of the general ledger you are on — vendors, IS managers or analysts — all agree that the client-server market will be different, demanding and difficult, but eventually worth the effort.

According to Jennifer Scholze, a software market analyst at IDC (Framingham, Mass.), worldwide vendor revenues for software and maintenance (not including revenues for consulting services or systems integration) from client-server financial software were only $75 million in 1992; but within five years, revenues will increase to about $1.1 billion — nearly a twentyfold increase. Consequently, there are opportunities for vendors and advantages for IS managers who can understand and implement client-server technology over the next several years.

Scholze's advice for vendors still thinking about client-server: "get your product out there." In her Forrester report, Dix forsees traditional suppliers going out of business or offering new client-server product lines.

HP itself, of course, has been an early and vocal proponent of client-server architectures. Now, that early calculated risk has been rewarded with an abundance of client-server applications available for HP-UX, as well as the HP 3000. "Any application vendor wants to be with HP," says Scholze. And that's not likely to change any time soon. According to Vince Gritsch, Channel Development manager for HP's Commercial Systems Division, HP-UX products are growing at rates of 40 percent per year. But the competition is hard at work: "IBM and Sun are working hard to get ISVs on their side," says Scholze.

For MIS, getting an early jump in the client-server market

BY GEORGE A. THOMPSON

Vendors And MIS Are Counting On Client-Server Financial Applications

also has its advantages: "those who get in the game early will receive extra support from vendors eager to get a foothold in the market and make a name for themselves," says Dix. For example, IDC's Scholze points out that PeopleSoft "was one of the first to grab mind share, which is a big part of the game." According to Scholze, the market share leaders in 1993 were Oracle, SAP, D&B, Platinum, PeopleSoft, Ross and Lawson, all of which got into the client-server market relatively early.

Counter Culture

SINCE ITS FOUNDING AS A start-up in 1987, all of PeopleSoft's client-server products have been based on four principles: Windows 3.1 APIs; an application toolset — PeopleTools; multiple SQL-based RDBMSs; and distributed processing between the server and client. Gia Knauss, PeopleSoft's manager of strategic partnerships, notes that all of PeopleSoft's products are "implemented in pure form, that is, rewritten using standard SQL as opposed to using a flat file and dumping it into a relational database."

PeopleSoft (Walnut Creek, Calif.), capitalizing on their earlier success with their PeopleSoft/HRMS (Human Resource Management Software) package, introduced PeopleFinancials in April 1992. Like its HRMS product, PeopleFinancials supports multiple databases, including HP's ALLBASE on MPE/iX, Oracle on HP-UX, as well as Gupta Technology's SQLBase, Microsoft's SQL Server on OS/2, IBM's DB2 on MVS and Digital's Rdb on VAX/VMS.

According to Knauss, "HP was our first client-server partner." Referring to HP's early client-server vision, she says, "HP saw what was happening, and decided to walk down the aisle in the 90s with client-server." Knauss estimates that of their UNIX installed base, 70 percent is HP-UX, the remainder consists of Digital, Sun, IBM and Sequent UNIX variants.

Another vendor with a from the ground-up client-server implementation is Platinum Software Corp. (Irvine, Calif.). Founded in 1984, Platinum is leveraging its historical experience in LAN-based accounting, with SeQueL to Platinum. Introduced in May 1992, a general ledger module was shipped in September 1992. Since then, Platinum has added accounts payable, and accounts receivable modules; in August 1993, they added inventory and cash management application modules and SeQueL Publisher, a query and reporting tool.

Unlike PeopleSoft's multiple database strategy, SeQueL to Platinum is optimized for Sybase's SQL Server with Microsoft Windows and OS/2 Presentation Manager clients. "With accounting applications, you must be in a position to maximize throughput," says Dave Howren, Platinum's vice president of alliance marketing. SeQueL to Platinum accomplishes that with what Howren calls "server intelligence." For example, posting routines are processed as "stored procedures" exclusively on the server. Consequently, performance is improved while network traffic is reduced. In the future, SeQueL to Platinum will take advantage of advancements in Sybase System 10, according to Howren.

SeQueL to Platinum was introduced simultaneously on the HP 9000 and Data General Aviion platforms. Howren says, "our ISV relationship with HP has been very successful." Of the 100 licenses of SeQuel to Platinum that have been sold, Howren estimates that 15 percent to 20 percent are working on the HP 9000/HP-UX platform.

Companies like PeopleSoft and Platinum, liberated from the mainframe and midrange legacies of the past, have been successful at establishing themselves within their particular niches. But to compete successfully in the future they must learn to support larger multinational corporations. And in fact, both companies' products include support for international businesses.

However, many Fortune 1,000 customers still prefer dealing with established suppliers like Dun and Bradstreet, Ross Systems and Lawson Software which have also introduced client-server financial products. Not surprisingly, both PeopleSoft and Platinum view Dun & Bradstreet Software (D&B; Atlanta, Ga.), a traditional worldwide supplier of mainframe applications, as a natural competitor in the client-server financial market.

D&B has been slower to position itself in the market than its younger, start-up competitors, introducing their client-server financial product, Financial Stream 1.0, in June 1993. Although Financial Stream includes the traditional general ledger, accounts payable, accounts receivable and fixed asset management applications, specific accounting tasks such as journal processing, payment request and invoice approval are classified as "business objects" (there are more than 180 objects). According to

Dan Dreshell, programmer manager for Financial Stream, "We've taken a process orientation, with workflow automation support, that is especially appealing to corporations that are reengineerring."

D&B has built their application with several third-party tools. According to Dreshell, Powersoft's Power Builder is used to build the client applications, Microsoft's Access database is used to drive the reporting process, while Cognos' Impromptu drives the analytical process. Like SeQueL to Platinum, Sybase's SQL Server "serves as the primary database engine," says Dreshell, "with an approximate 50/50 processing split between server and Microsoft Windows clients."

Although Financial Stream just shipped in September 1993,

PeopleSoft and Platinum view Dun & Bradstreet Software, a worldwide supplier of mainframe applications, as a natural competitor in the client-server financial market.

"more than 90 percent of our prospects are on HP platforms," says Dreshell. According to Dreshell, only 50 percent of D&B's installed base are thinking of moving to a client-server architecture. Supporting that installed base could be a problem for D&B, but Scholze sees that number dropping to between 20 percent and 30 percent in the next three to five years. D&B, she says, is "tied into what their users are thinking."

As the worldwide market share leader, Oracle Corp. (Redwood Shores, Calif.) is a company that's already proven it's in tune with its users. According to Chris Roon, Oracle's director of applications marketing, Oracle's client-server approach involves what he calls a "fat client/thin server or thin client/fat server philosophy."

The description refers to the amount of CPU performance, memory and disk capacity necessary to support the portions of the applications that are distributed between the clients (PCs, dumb terminals or X Windows terminals) and the server. Generally, a "fat client" is one that has both the GUI and application logic installed on it.

While fat clients are popular in the United States, where 75 percent to 80 percent of the LANs are installed, Roon says the international market is not really demanding a fat client because networks are still less prevalent and hardware is more expensive.

Roon explains that fat clients were initially appealing because typical clients (PCs) were cheap, while servers were expensive." Now, clients and servers both have CPUs with similar processing power and are both relatively cheap. Consequently, he says, "The economic reason to push the application logic onto the client no longer exists."

Oracle, well-known for their mainframe and minicomputer interoperability and scalability products, introduced Release 9.4 of Oracle Financials in June 1993, which uses Oracle's own Oracle7 RDBMS introduced in May 1993. Oracle Financials was ported to HP's MPE platform four years ago.

Lawson Associates (Minneapolis, Minn.) is another vendor of mainstay mainframe financial applications who saw the opportunities of client-server earlier than most. "We've been operating in a multiple database environments for years, that's our culture," says Mark Galloway, director of technologies for Lawson. Consequently, he says "a move to Windows and PC LANs was easy."

Lawson's Open Enterprise 6.0 supports multinational currency, multinational languages and various international tax structures. Open Enterprise supports Oracle7, Informix and Sybase RDBMSs as well as the IBM AS/400's OS/400 database through what Lawson calls the Enterprise Server. According to Galloway, the Enterprise Server takes advantage of an "intelligent centralized, object-based, active repository" that stores all the file relationships, data rules, business rules and user interface descriptions. "It's like a card catalog in a library where I can find where I need to look for information," explains Galloway.

Open Enterprise offers a unique "drill-around" option rather than the typical "drill-down" which provides all the information available for a particular account. Windows 3.1 and Windows NT clients are supported as well as character terminals for AS/400 and UNIX platforms. Macintosh and OSF/Motif GUI support "is in process.

"HP is our core development environment," says Galloway. "Seventy-five percent to 80 percent of our open systems clientbase is running HP-UX servers." Since July 1993, 20 Fortune 1,000 clients have signed on to run under Open Enterprise," he says.

SAP AG (Waldorf, Germany), is another traditional worldwide supplier of mainframe financial software, that responded to the client-server call by completely rewriting its popular R/2 System host-based application. First released in Europe, R/3 has been available in North America since September 1992. Although R/3 imitates the enterprise-wide integration of R/2, "R/3 is not compatible with previous R/2 applications," says Barbara Masseck, corporate presales manager for SAP America (Lester, Pa.).

Designed with multinational corporations in mind, R/3 Release 2.0 (the current version introduced in August 1993) is appealing to customers because of its integrated nature. However, Release 2.1, scheduled for introduction in January 1994 adds a manufacturing and production component making it more equivalent to R/3 in its scope, according to Masseck.

R/3 depends on Oracle7 or Informix RDBMSs as the server component under HP-UX, IBM's AIX, DEC's Ultrix or SINIX.

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Oracle is supported under HP's Allbase on the HP 3000/MPE/iX, as well as DEC's Open VMS. GUIs supported include OSF's Motif, OS/2 Presentation Manager and Windows 3.1. Clients supported include dumb terminals, X terminals and PCs.

Ross Systems (Redwood City, Calif.) is yet another worldwide software vendor that has been successful in establishing itself beyond an original single vendor niche. Ross was a dedicated Digital VAX software supplier before introducing its client-server financial package — the Renaissance CS Financial Series — in January 1993. Since then, according to IDC's Scholze, Ross had $10 million in client-server software and maintenance revenue, giving the company a new but significant piece of market share in 1993.

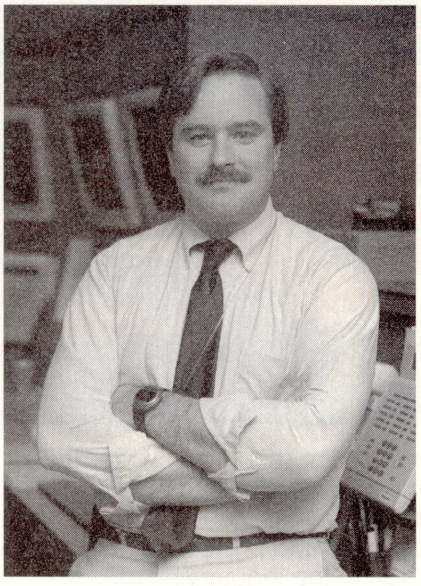
Like D&B, SAP and Lawson, Ross' Renaissance CS was designed with multinational corporations in mind. Although they are headquartered in the United States, Ross "derived about 45 percent of their fiscal 1993 revenues (June 30) from Europe," according to Joe Southward, Ross' vice president of worldwide marketing. He notes that in Europe "most of the HP implementations are on the server side rather than on the client side."

Renaissance CS runs on any variation of HP-UX over Oracle7 or Ingres RDBMSs. Clients supported include Windows, Macintosh, as well as character-based terminals. Renaissance CS applications are developed using Ross' Gembase, a 4GL tool. In the next three to five years, Southward sees Windows NT and Sybase as popular server platforms. "Microsoft doesn't lose very many battles," he says.

After a winter 1991 start date, Southward says, "Renaissance CS was an 18 to 24 month effort." But because Ross is a new HP vendor, having introduced Renaissance for HP-UX in June 1993, several HP implementations are still in progress. Of its current installed base, Southward estimates that one-third to half are planning to convert to Renassance CS within the next 12 to 15 months."

Counting On Microsoft

AT THE SAME TIME THAT IS managers are pushing vendors for software tools that are inexpensive, easily available and well-known by many programmers, PC-literate users are pulling on IS departments for standard query, reporting and desktop productivity tools that integrate with their favorite PC word processors and spreadsheets. In other words, if monolithic solutions are out, Microsoft standards (and products) are in.



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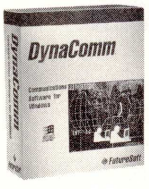

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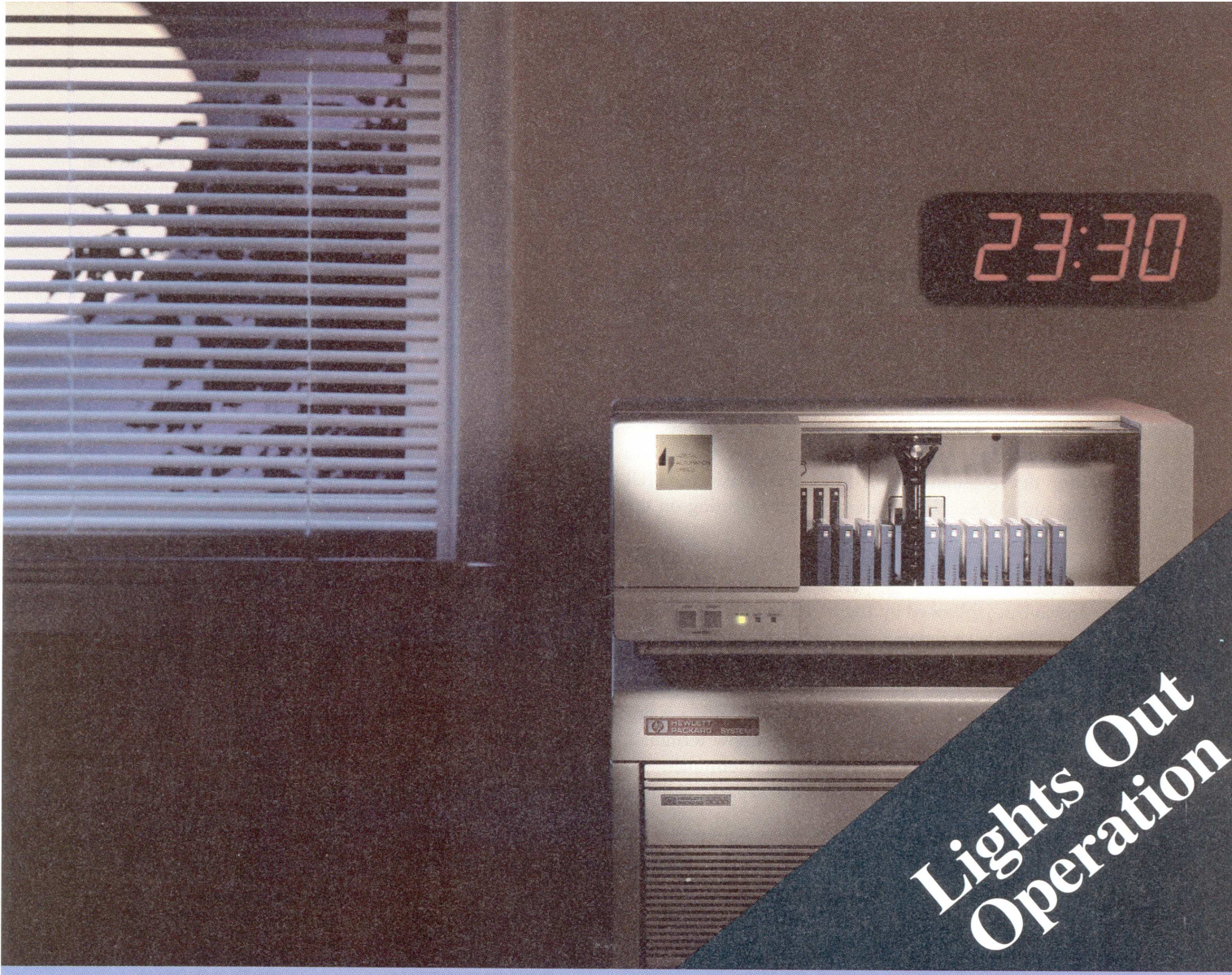

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Coda Inc. (Manchester, N.H.) and Collier-Jackson (C-J; Tampa, Fla.), two vendors well-known for their HP 3000 financial applications, are now depending on Microsoft's dominance in the market to create "open" client-server standards.

Founded in the U.K. in 1979, Coda introduced their client-server financial software called Open Accounting System (OAS) in September 1993. OAS is similar to Coda's multinational Integrated Accounting System (IAS) that already runs on HP 3000, Digital VAX or IBM AS/400 systems.

According to Marc Gilman, Coda's manager of financial applications, "Rather than use third-party proprietary tools, we used tools provided by Microsoft like Visual C++ which was used by our development team, MS Visual Basic for GUI prototyping and MS Access for querying and reporting on the client side."

In addition, "we offer database-specific drivers, for all the different databases we support." Coda's leading RDBMS is "Oracle and Sybase, followed by Ingres, or any SQL database," says Gilman. "We have isolated our application from the operating system as well as the database from the presentation manager. We don't modularize our coding or our applications, ... we have a unified database." OAS supports MS Windows as primary clients with secondary drivers for X Window terminals, Motif and Macintosh GUIs, and character-based terminals.

Referring to a client base of about 1,000 separate companies, Gilman estimates that about 400 use HP 3000s and that 70 percent of them are considering moving to open systems via HP-UX in the next 12 to 24 months. The remaining 30 percent are not planning to migrate. Nevertheless, Gilman says "we plan to support MPE/iX in the future."

Although Collier-Jackson introduced its World Class Accounting Series in October 1992, a port of its mainframe software, the company is now depending on Microsoft. "Today we are moving as rapidly as we can to move all of our applications to the Microsoft environment using Microsoft tools," says Jim Douglas, vice president of research and development for Collier-Jackson.

In fact, Douglas sees Microsoft's "Information At Your Fingertips" concept as a "fundamental change in the rules of the game." For its next generation of client-server applications, C-J is using Microsoft's Object Linking and Embedding (OLE) for linking and automating applications and MS MAPI standards for messaging enabling.

Douglas explains, "we can expose our applications to the capabilities of the MS Office suite of integrated applications as if they were in MS Office — MS Word, MS Project, MS Excel and MS Mail. From an applications developers perspective, "it gives them a larger palette of tools to choose from." According to Douglas, C-J is looking to Sybase's SQL server as "the delivery database of choice with Windows-based clients."

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According to Douglas, a general ledger module will be introduced before the end of 1993, with accounts payable and accounts receivable applications in early 1994.

In the future, Douglas expects to go beyond the MS Office family of products, to other OLE-enabled applications like faxing, voice annotation, and even "integrating your PBX" and eventually to public databases. Eventually from the keyboard, you'll have seamless access to anyplace you need to go to do your job," that's all available through Microsoft's strategy."

Not surprisingly, Douglas sees Windows NT as an important strategic product for HP users. "NT servers will in many cases be linked to 3000 and 9000 servers. Some will be tied into Allbase or Image/SQL and take advantage of the desktop tools through Microsoft's Open Database Connectivity (ODBC) standards." According to Douglas, C-J's total HP installed base is just under 2,000 application platforms (HP 9000 and HP 3000).

Although lagging behind its competitors in the market, Computer Associates (CA; Islandia, N.Y.) is developing a unique client-server blueprint with its CA-MasterPiece Financial Management Series.

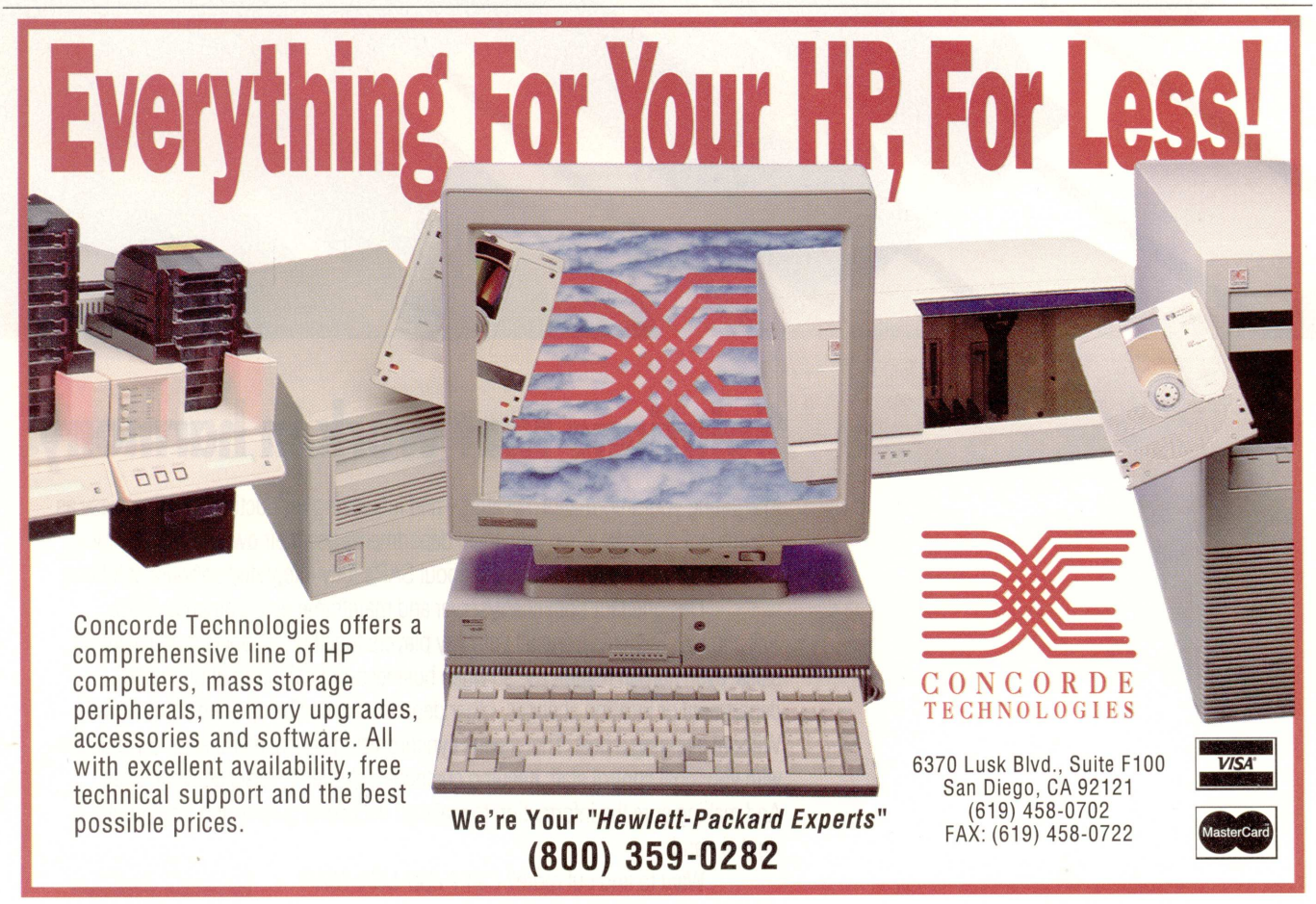
Masterpiece follows CA's CA-90: Computing Architecture, a design that separates not only the applications from the GUI, but the database from the platform as well. Consequently, CA-Masterpiece will eventually be independent of platform. "The application doesn't change. The system services layer is tuned to exploit the particular platform we're running on," says Ken Bell, CA's marketing manager for Masterpiece.

"We will be able to on run HP-UX as well as the AS/400 or NCR UNIX platforms," says Bell. On the HP 9000, we will be supporting Oracle, Sybase and our own CA-DB. The client side will be Windows-oriented and will support Microsoft's ODBC.

Although Masterpiece is currently host-based, Bell notes that "we have workstation tools that allow you to do cooperative processing on the client. For example, data entry on accounts payable and general ledger information can be entered and validated on a PC, then uploaded to the host and into Masterpiece."

Counting On Objects

SOME VENDORS LIKE Computron Technologies Corp. (Rutherford, N.J.) are taking an object-oriented route to financial software. Computron's N-Dimensions consists of separate financial and accounting modules with an integrated imaging component. "Imaging technology allows you to scan an image, like an invoice, put it into a financial application, then link it



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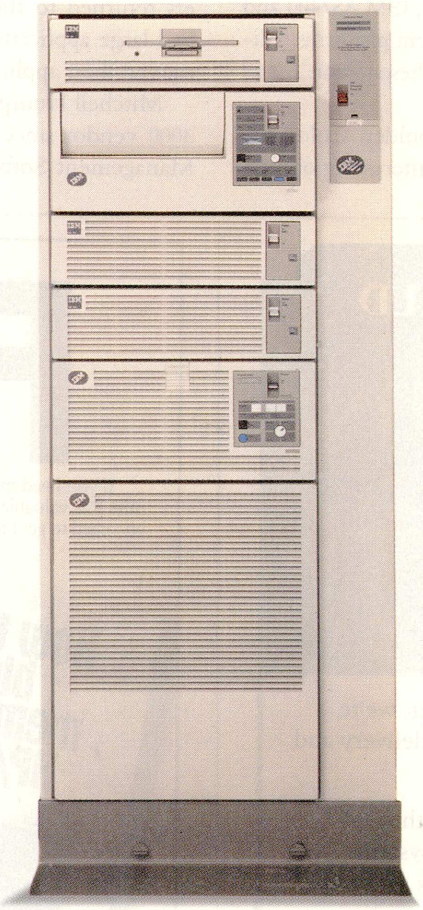

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to specific data, display it, print it and store it," says Adam Thier, Computron's manager of corporate marketing.

As a former Wang software vendor, Computron saw the value of adding imaging to their applications. "Ninety percent of the work done by an accounting clerk is retrieving or refiling paper documents," says Thier. "Wang inspired us to add imaging as an integrated part of our applications."

In 1991, Computron moved into the workflow imaging market with its EPIC software. EPIC is workflow management software that is an optional application which "automates and controls all the manual operations that surrounds a computer application, like copying and routing," explains Thier. Although more than 50 percent of Computron's workflow imaging installations are unrelated to financial systems, "financial software accounts for 65 percent of Computron's revenues," Thier says.

Computron's financial software supports HP's Allbase, Informix, Sybase and Oracle (in December 1993) databases and runs on HP-UX servers, as well as HP 3000 MPE/iX systems, IBM AS/400 and RS/6000, Sun's SPARC, DEC's Alpha and Sequent platforms. Clients supported include Windows, IBM OS/2 Presentation Manager, Motif, Macintosh and dumb terminals.

Flexiware (Shelton, Conn.) and Capri (Boulder, Colo.) are two other vendors who are putting together interesting object-oriented applications. "Object-oriented tools could be the next generation," says Scholze. Software 2000 (Hiannis, Mass.) is also prepared to introduce a rapid application development tool, using object-oriented database management systems.

Still Counting On Old Money

FOR FORTUNE 1,000 IS managers still unconvinced about the virtues of client-server, there are reasons to be skeptical. "Client-server is not a panacea," says John Leslie, president and CEO of Multiview Corp. (Burlington, Mass.), a dedicated HP 3000 vendor since 1982. "You have to use it [client-server technology] where it fits the best in your organization," he cautions.

Multiview is "now moving into that paradigm [client-server technology]," says Leslie. But he also says, "I don't think the HP 3000 is dead." According to him, some Multiview customers returned to the HP 3000 after moving to HP-UX. "They had large applications and needed more OLTP power, so they moved their applications back.

Mitchell Humphrey & Co. (MH&C; St. Louis, Mo.), an HP 3000 vendor since 1977, is now beta testing its new Financial Management Software (FMS) II, a client-server version of its

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orginal FMS for the HP 3000. "We began working on it about three years ago," says Ken Benvenuto, Mitchell Humphrey's senior vice president of operations.

According to Benvenuto, FMS II, developed in C and C++, "is completely rewritten from the ground up." FMS II will run on HP 3000 and HP 9000 platforms acting as servers, and as a server or client on Intel 386- or 486-based PCs running MS Windows.

Benvenuto says FMS II will be market-ready by January 1994 and expects that 100 percent of the current HP 3000 installed base will move to FMS II within the next 24 to 30 months. Benvenuto also expects the majority of those customers to continue using the HP 3000 platform.

Although the HP 3000 may be far from dead, HP 3000 users should expect other vendors to follow in the footsteps of Multiview and MH&C. In fact, as more vendors introduce client-server products, Forrester's report warns that unless corporate *planning* for client-server begins *now*, getting stuck with orphaned products is likely.

Because computing cultures are inherently linked in part to a company's organizational structure, moving already well-established IS networks to client-server is not going to happen overnight. The same goes for vendors now converting monolithic applications for distributed client-server architectures or new vendors starting over with a new vision.

For example, although the Dodge Group (Waltham, Mass.) has been delaying the announcement of their client-server product, Scholze thinks that "it will be very good once it comes out." SQL Financials (Atlanta, Ga.) is betting on Gupta's SQLWindows. And it remains to be seen how well IMRS (Tustin, Calif.) melds its Hyperion financial consolidation product with accounting systems acquired in its buyout of MAI Systems Corp. in February 1993.

Although client-server configurations have the potential to empower your users and make your company competitive, putting your financial legacy on the wrong platform, or worse — in the wrong hands — could lead to disaster. So, a commitment to client-server is best mixed with some caution, especially when you consider that 85 percent of the information analyzed to support corporate decisions is financial data.

Nevertheless, as Forrester's analyst Dix points out, eventually it's results that count: "As more success stories come out about client-server technology, they will all say, 'I guess it really does work.'"

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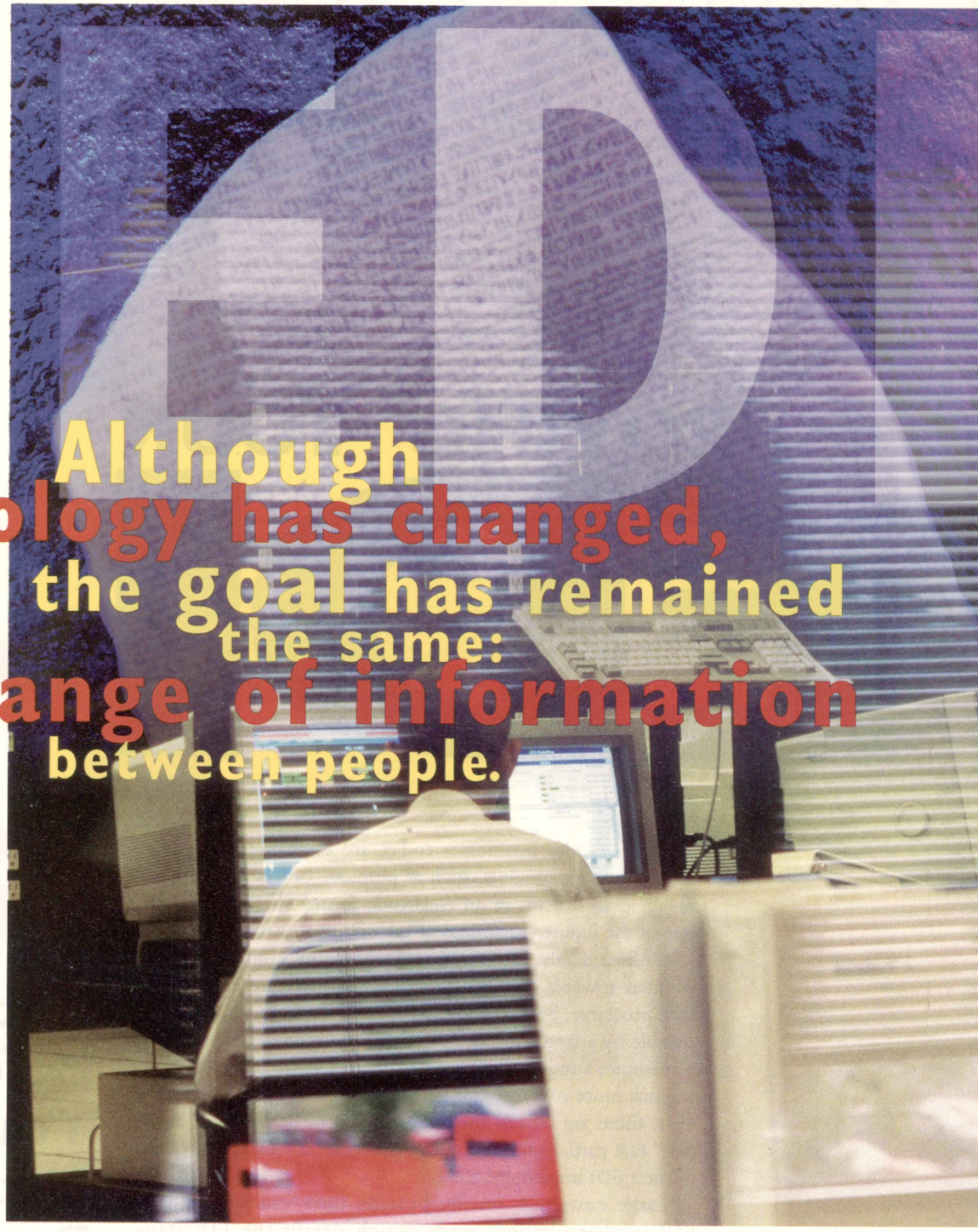

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Look Before You Leap Into EDI Partnerships

BY DR. TREVOR RICHARDS

Many businesses today are exchanging business documents, such as purchase orders and sales invoices, in an electronic format that conforms to one of the industry, national or international EDI standards.

Unfortunately, the approach that many companies have adopted towards EDI has been predominately reactive rather than proactive, because they were "persuaded" to become EDI-capable by a large customer. In many ways, merely reacting to a customer's requests can lead to an EDI implementation that is much more costly to support than it need otherwise be. However, there are several methods which can be used by "reactive" EDI participants to improve the efficiency and effectiveness of their EDI implementations.

Large customers usually provide their vendors with an EDI implementation guide which details the EDI standard to be used, the EDI transactions that are currently supported or are going to be supported in the near future, and where individual data items are located in these EDI transaction sets. The customer may also include sample EDI data file listings for each transaction. These listings show the manner in which data elements have been mapped to the EDI transaction set from a sample business document, such as a purchase order.

The implementation guide is an invaluable tool that the vendor can use to determine which data elements can be used from incoming EDI transactions to update internal business application

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Unfortunately, the approach that many companies have adopted towards EDI has been predominately reactive.

systems. It also shows which fields need to be extracted from internal business application systems to provide the data elements required by the customer for each outgoing EDI transaction.

This "mapping" of data elements, from an EDI transaction to the data files supporting a business application, is typically the main focus of attention during the implementation of EDI for the exchange of a particular business document between the customer and the vendor. For example, for an inbound purchase order, the vendor will set up EDI software to handle the transformation of the EDI data to a more manageable format which can then be loaded through an application interface program into the order processing application.

In many EDI implementations, the vendor will complete the testing of and begin implementing their first EDI transaction with a customer before looking at either: the requirements of this customer for other transactions in the business cycle; or the implementation guidelines of other customers.

By ignoring the customers' requirements for further transactions in the business cycle, it is easy to miss data elements on the inbound transaction that are required on the subsequent outbound transaction. This data may have no direct benefit to your internal business application but is essential for the customer to enable them to complete the loop of a particular business process cycle.

Sears, Roebuck Implementation

AN EXAMPLE OF THIS IS the sales division number and department number that Sears, Roebuck and Co. will send to a vendor in an EDI purchase order. If a Sears vendor implements the inbound purchase order, it may seem that these numbers do not need to be loaded to the internal application, because they have little or no benefit for the

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By ignoring the customers' requirements, it is easy to miss data elements on the inbound transaction.

purpose of fulfilling the order. However, when the vendor is approached by Sears to implement the outbound EDI sales invoice, it becomes evident that these numbers do need to accompany the order in the vendor's order processing system, because they are mandatory in Sears' implementation of the outbound EDI invoice.

When implementing an EDI transaction, it is advisable to examine all of the transactions in the business process cycle which the customer supports via EDI to ensure that data requirements for subsequent transactions are considered when mapping data for the preceding documents in the cycle.

It is important to note the requirements on the first EDI transaction, because it is probably safe to assume that the manner in which the first EDI customer has chosen to implement the transaction will be representative of other customers' requirements. EDI standards are ambiguous, and they allow sufficient flexibility to enable customers to employ radically different data structures within their implementations of the same transaction, but overall many elements will be the same.

For instance, KMart will send a purchase order with a single ship-to location for the entire transaction, but Wal-Mart will send a purchase order which details several hundred ship-to locations with associated delivery quantities for each purchase order line item.

Consequently, a vital part of the planning stage for the implementation of the first EDI transaction with the first customer is to obtain the EDI implementation guides for as many customers as possible, so that their requirements can be considered along with those of the first EDI customer. This will minimize the amount of rework that needs to be applied to the initial data mapping and application interface program when further customers are brought online.

Another area which should be addressed as early as possible in the planning stages is the alignment of common data files, such as product and ship-to location information. In order to automate the receiving and loading of inbound transactions into the receiving application as smooth as possible, it is highly desirable to ensure that transactions will not be rejected due to invalid vendor part numbers or a non-existing cross-reference file entry.

There are many ways to ensure that these common data files are kept up to date. Before they begin, the vendor and customer may exchange reports detailing product and ship-to identifiers. They also may establish a procedure for reports of additions, modifications and deletions from these files to be exchanged at predefined intervals. Increasingly, customers and vendors are turning to EDI transactions designed for the exchange of master file data.

Retail Details

IN THE RETAIL INDUSTRY, it is common for vendors to provide customers with product identification and pricing information via the Price/Sales Catalog transaction set (832). This can be exchanged directly between vendor and customer; but two catalog service providers — Quick Response Services (QRS) and UPC*EXPRESS — provide retail stores with the ability to retrieve product identification and pricing information for many vendors from a single source. The advantage for the vendor is that these two catalog services are the only recipients of the 832 transaction set, removing the need to transmit the 832 transaction set to each customer.

Both QRS and UPC*EXPRESS allow the vendor to provide updates to their Price/Sales Catalog information, and provide the customer with a wide range of options for retrieving this data automatically or via customer-initiated sessions.

J.C. Penney Co. Inc. and Sears have also started to use the Text transaction set (864) to transmit a complete list of all their ship-to locations to vendors. Once the initial ship-to location file has been transmitted in this manner, the 864 transaction set also is used to transmit any subsequent updates.

Today's business process cycles involve the transfer of physical documents between customer and vendor which contain a great deal of common information. Each physical document contains the information from the preceding document in the cycle plus a little additional information. For instance, in a typical order cycle the invoice contains all the ship-to notice information plus line item pricing, discount and allowance details, and invoice totals.

If the customer intends to implement EDI as a replacement for the exchange of physical documents in the business process cycle, then it is best if a vendor implements EDI as early in the cycle as possible to ensure that the succeeding transactions in the cycle have the highest level of accuracy.

Therefore, if a customer requests that a vendor implement the invoice transaction as the first EDI implementation, it would be highly desirable to persuade the customer to begin with the

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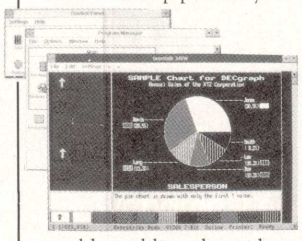

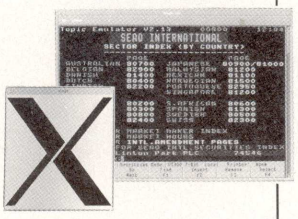

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purchase order transaction because the common data that would be returned later in the cycle in the invoice transaction would have originated from the customer.

To take this a stage further, from the vendor perspective it would be preferable to implement the Price/Sales Catalog transaction with the customer before implementing the purchase order transaction, because the product identification and pricing information in the purchase order would be based on data originated from the vendor.

Think About The Infrastructure

EDI IS NOT THE ONLY technology being applied by corporations to re-engineer their business processes. Consequently, it is important to ensure that the introduction of other technologies compliment EDI implementation. In the automotive and retail industries, where customers purchase standard products, bar coding technology has been applied to automate identification of individual products and product packages. In both industries, the receiving department at each ship-to location is likely to receive advance warning of a vendor's shipment via EDI.

The advance ship notice transaction carries the contents of the overall shipment bar code label, together with details of all other bar code labels applied to the product containers, and estimated time of arrival. The receiving department can then just scan each of the bar code labels received on the physical shipment to confirm that it tallies with the shipment notice.

The scenario above indicates that the shipment module of the vendor's sales order management system should be capable of capturing the data contained on the various bar code labels which accompany the physical shipment and extracting that same data to include in the advance ship notice to be transmitted via EDI to the customer well in advance of the estimated time of arrival. This illustrates that all aspects of business process re-engineering being discussed with customers should be examined at the outset of an EDI implementation.

In summary, when planning an EDI implementation it is wise to give as much thought to the infrastructure supporting the transfer of these business documents in a standardized electronic format as you give to the automation of that transfer.

Companies who address the issue of the EDI implementation as part of an overall plan to improve the effectiveness and efficiency of their business process cycles have enjoyed a healthy return on their EDI investment.—*Dr. Trevor Richards is an EDI specialist with M.B. Foster Associates, a supplier of EDI products and services.*

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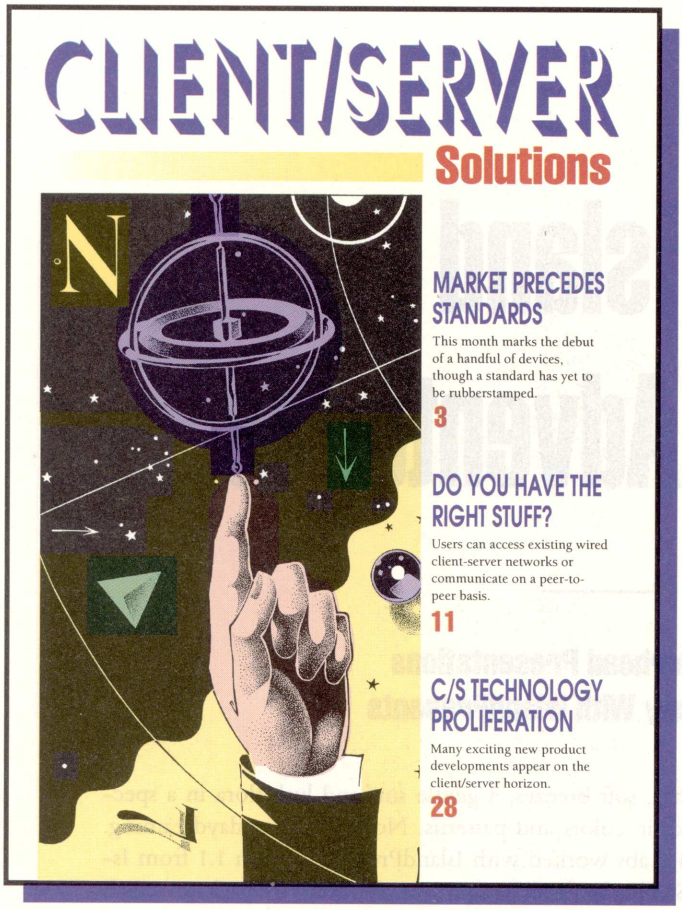

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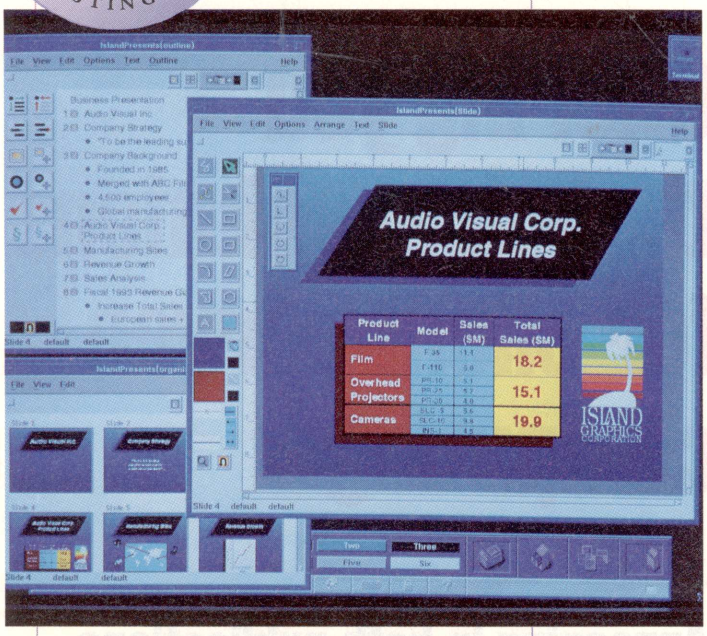

Island Adventures

Slide and Overhead Presentations Are Made Easy With IslandPresents

Sandy beaches, soft breezes, a gentle surf and lush flora in a spectrum of exotic colors and patterns. No, we're not daydreaming. But recently DP Labs worked with IslandPresents version 1.1 from Island Graphics (San Rafael, Calif.), a presentation software package which brings the images of a tropical paradise to mind. And like our imagined tropical paradise, IslandPresents provides you with a palette of color and form that you can apply in a variety of ways to create slides and overhead presentations on HP 9000/700 and 800 workstations.

Island Essentials

This paradise has a price, however. IslandPresents' three modules — Outliner, Slide Editor and Organizer – by their nature require significant system resources. These modules take in, organize and output tables and charts from other applications in the Island Productivity series (IslandTable and IslandChart) into presentations.

On our HP 9000/710 workstation, loading the application under HP-UX 8.07 (it also runs under release 9.0 of the OS) calls for 18,020 KB of free disk space for IslandPresents' "common files," which are shared by its various modules. You'll also need an additional 17,937 KB if you intend to load all other Island Productivity series modules related to IslandPresents (Chart, Paint, Table, Draw). So that means your looking at a total storage requirement of about 36 MB.

Michele Petrovsky

ISLANDPRESENTS

OBSERVATIONS:

- A large library of clip art
- Can import charts, graphs and art
- Can print sections of documents, individual documents or collections of documents
- The application uses a large amount of disk space

PRICE:

IslandPresents is $995, which includes a floating license and Island Chart, Island Table, and Island Paint

PLATFORM:

Any HP 9000/700 or 800 host running HP-UX release 8.07- 9.0

Island Graphics Corp.
4000 Civic Center Dr.
San Rafael, CA 94903
tel: (415) 491-1000
fax: (415) 472-0335

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Even when you consider the configuration tasks, its's still a short trip to presentation paradise.

In addition, you'll need OSF/Motif (version 1.1 for HP-UX 8.07 and version 1.2 for HP-UX 9.0) already installed. Also, make sure your intended IslandPresents host has a minimum of 16 MB RAM and 40 MB swap space, as well as a 4mm DAT drive. Once you've run through this checklist successfully, you're ready to install IslandPresents.

Loading IslandPresents is as smooth as a tropical breeze. It involved logging into our HP 9000/710 as root, creating a directory structure, and using Update from HP-VUE to indicate to HP-UX such details as specific files to be retrieved from the tape since we weren't loading the entire Island Productivity set, and where in the file system they were to go. Even when you consider the remaining configuration tasks — adding passwords and arranging for the IslandPresents license daemon to start automatically at bootup or the login of specific users — it's still a short trip to your presentation paradise.

Aloha

IslandPresents is completely menu-driven. What's more, the product is accompanied by excellent documentation which includes a thorough tutorial. Anyone involved in the creation of slides or overheads could use the tutorial to come up to speed in a few hours.

After starting IslandPresents in the background, we selected one presentation template, from among many, via the File menu of the Outliner window.

"Locking in" our choice with the Make Current button, we were then presented with an outline for our presentation. We were instructed, among other things, to add text for the presentation's title and to add text and place bullets in the first slide. Because our programming background had never required us to create presentations of any sort, this much help raised our confidence level.

Next, we used the Add Slide tool from the Tool Palette to include more slides in our presentation. Then, we sectioned off our existing material; that is, we organized it into outline sections. Then, using the Import feature of the Outliner module we imported some graphics into our budding presentation.

We also were able to scale, draw and fill in an area around and behind the graphic. Feeling superior now, we went on to add a fourth slide.

Next, we turned to manipulating slide formats. We added page numbers to each slide and we used IslandPresents' Organizer to both view and reorganize our work. Of course, we did a dry run of our finished presentation. On the monitor, our presentation ran smoothly, showing us each slide in the order in which we'd organized them and even in the manner we'd specified, top to bottom for some, left to right for others.

But, a presentation is of little use if its only medium of display is a monitor. IslandPresents prints an outline of the completed presentation; speaker notes, made up of the slides themselves as well as an overview of all the slides in a presentation; and handouts for one's audience. Any combination of these document types can be printed; likewise, you can deal with any individual document or even document sections as a separate print job.

IslandPresents provides the following output formats: PostScript B&W; PostScript Color; HP LaserJet; HP PaintJet; HP DeskJet 500C B&W; and HP DeskJet 500C Color.

In addition, IslandPresents offers 11 default fonts, including the venerable Courier and Helvetica, as well as Zapf Dingbats. The type style of your presentation can include bold, italic or underline. Its type size can range from four to 72 points.

There is plenty of proof that what's pleasing to the eye is readily retained in the mind. With IslandPresents, you can create effective and pleasing presentations that won't leave your audience daydreaming. ■

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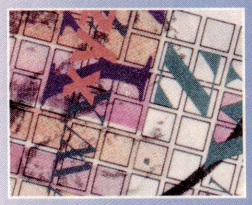


UNIX

Miles B. Kehoe

Across International Lines

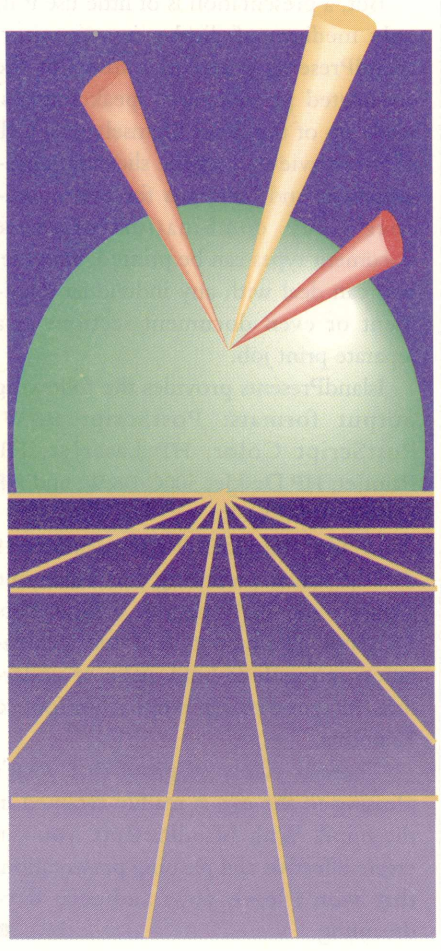
This month we'll take a look at the international network that has been synonymous with UNIX for so long, the Internet. The Internet, or simply "the net," is a collection of smaller regional networks, connected together over TCP/IP lines. These connections are often over very high-speed data communications links, sometimes using cables and land lines, and sometimes using satellites. These high-speed links carry data files, E-mail, remote login sessions and file transfers.

There are other widespread networks which are often confused with the Internet including UUNET and BITNET. UUNET is a loose collection of systems that establish a connection, usually via modem, on a regular schedule or when requested by a user. These systems originally transferred E-mail and news, the electronic version of the community bulletin board. The protocol that these systems use to communicate is known as UUCP, which stands for UNIX to UNIX Copy Program. Some UUNET sites now communicate regularly over high-speed network connections including the Internet.

BITNET is another loose collection of systems that communicate when necessary, again typically by point-to-point modem connections over standard dial-up phone lines. Like UUNET, BITNET supports E-mail and limited file transfer capability.

Nonetheless, the Internet has grown from the Defense Department Advanced Research Projects into the worldwide network of interconnected systems. Of course, there needs to be a standardized method of addressing each of these systems uniquely. The task of assigning these numbers is handled by the DDN Network Information Center, which insures that each system connected to the Internet has a unique 32-bit numeric address. These addresses are usually expressed in sets of four 8-bit octets. Thus, you may see addresses like **123.23.75.122**.

But, because humans don't remember these long numeric addresses very well, systems are normally known by logical names that reflect the hierarchy of the network as well as uniquely identify each system. These names, which serve as aliases for the actual network address of each system, take the form **SYSTEM.ORGANIZATION.TYPE**.



The rightmost element, **TYPE**, defines the kind of organization using that particular network address. The most common types include COM for commercial institutions, MIL for military sites, EDU for educational institutions, GOV for other government agencies and ORG for organizations that don't otherwise fit. Occasionally, you'll see country names instead of one of these organization types. For example, you may see CA for Canada or AU for Australia.

The next element to the left, **ORGANIZATION**, indicates the name of the organization. You will see names like HP, SUN, UCLA and NASA. When you form these together with the element type, you'll start to see addresses like HP.COM or NASA.GOV. We're beginning to form a unique address that describes a site not only to the Internet, but also to the users.

The next element in the address, **SYSTEM**, usually names an individual system at a site. When you combine the system name, the organization name, and the type, you will see addresses like **HOBBES.NETCOM.COM**, **TIGER.HP.COM** or **LION.REDSTONE.MIL**.

While this naming convention is sufficient for many sites to completely describe a system, other sites have networks of systems managed by departments or groups within an organization. Depending on the overall site management, it may be desirable to address each of these departments individually. In these cases, you may see a fourth element in a network address. This explains addresses like **CALVIN.CS.UCLA.EDU** or **GARFIELD.MIS.HP.COM**.

E-mail Made Easier

Each user on the Internet will have a login ID, as well as a particular computer system where his or her files primarily

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reside. Thus, to send E-mail to someone, you need to generate a fully qualified address that includes the person's login ID, the system name, and the organization name and type. Hence, an Internet mail address might be **CALVIN@HOBBES.UCLA.EDU**. Interpret this address as user Calvin at system Hobbes at UCLA, an educational institution. As you well know, people move around at large organizations, and networks never seem to remain static; new systems are always coming online. You can never be too sure where Calvin might be tomorrow.

So that you don't have to be aware of all the systems within a particular site, or domain, and so every system on the Internet doesn't need to keep track of a dynamic and growing database of network addresses, each domain typically has at least one server which keeps track of addresses within its domain.

Thus, within **UCLA.EDU**, there is a single designated system — or domain name — that will provide information about any user and system within UCLA. Any and all requests will be routed to this system, and it will resolve the actual address for a user or location for a file.

So, if CALVIN is the domain server for UCLA, you can send E-mail to **CALVIN@HOBBES.UCLA.EDU** and it will locate the actual system CALVIN uses and forward it accordingly. In fact, this system is often the default system for incoming messages, so you'll see that you can sometimes omit the server name and simply address **CALVIN@UCLA.EDU**. Of course, now the network administrator needs to verify that only one user has the login name CALVIN.

An alternate form of addressing that you may see is normally associated with UUCP and UUNET. Rather than using the @ syntax, these mail addresses include a ! or "bang" to designate an address. These UUCP addresses are more restrictive: you need to provide the absolute path to the user, and the system allows no leeway

A UUNET address takes one of two forms: **SYSTEM!USER.ORGANIZATION.TYPE** or **USER%SYSTEM@**

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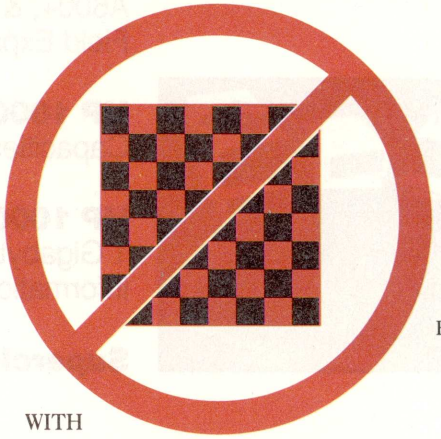

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ORGANIZATION.TYPE. These addresses are used when a user is on a system which is connected to the net, but which does not have a domain name of its own. An address like **milo%bloom@netcom.com** specifies that the user **milo**, known to the system **bloom**, can be reached via **netcom.com**. Mail so addressed is sent to the system **bloom@netcom.com**. Once the mail is received, **bloom** locates user **milo** and completes the transaction.

In nearly all cases, undeliverable mail results in a message being sent to the originator by the mail server on the final system through which a message was sent. For example, if there were no user named Milo in the previous example, the mail server on **bloom** would attempt to notify the sender that the mail was not able to be delivered.

Often, the mail administrator at the site is also sent mail so that, with any luck, human intervention can solve the address problem. If you received a message that mail was undeliverable, you will see a complete summary of all the systems which were involved in sending the message so you can try to resolve the problem.

Mail over the net can be very fast. I've found that it takes only minutes for me to exchange E-mail with distant friends. There are also mail gateways that connect different types of systems. For example, it is easy to send mail from the Internet to users of CompuServe, MCI Mail and even some local bulletin board systems.

For example, to send mail to a CompuServe user from the net, simply use the CompuServe account number as the account name. For example, to reach me on CompuServe via the net, use the address **76711.405@compuserve.com**. You can address MCI Mail and America OnLine users similarly at **MCI.COM** and **AOL.COM**, respectively.

You also can send mail to Internet users from these commercial systems, although each one uses a different syntax, and it may look rather cryptic. For example, to mail to my Internet account from CompuServe, use the form **>internet mbk@netcom.com** when CompuServe prompts you for the destination address.

That concludes our brief introduction to the Internet. If you have any questions, or want to learn more about the Internet, send me E-mail! If you are not adventurous, or if you don't have access to any of these exciting systems, feel free to contact me through standard mail at Cardinal Business Media.

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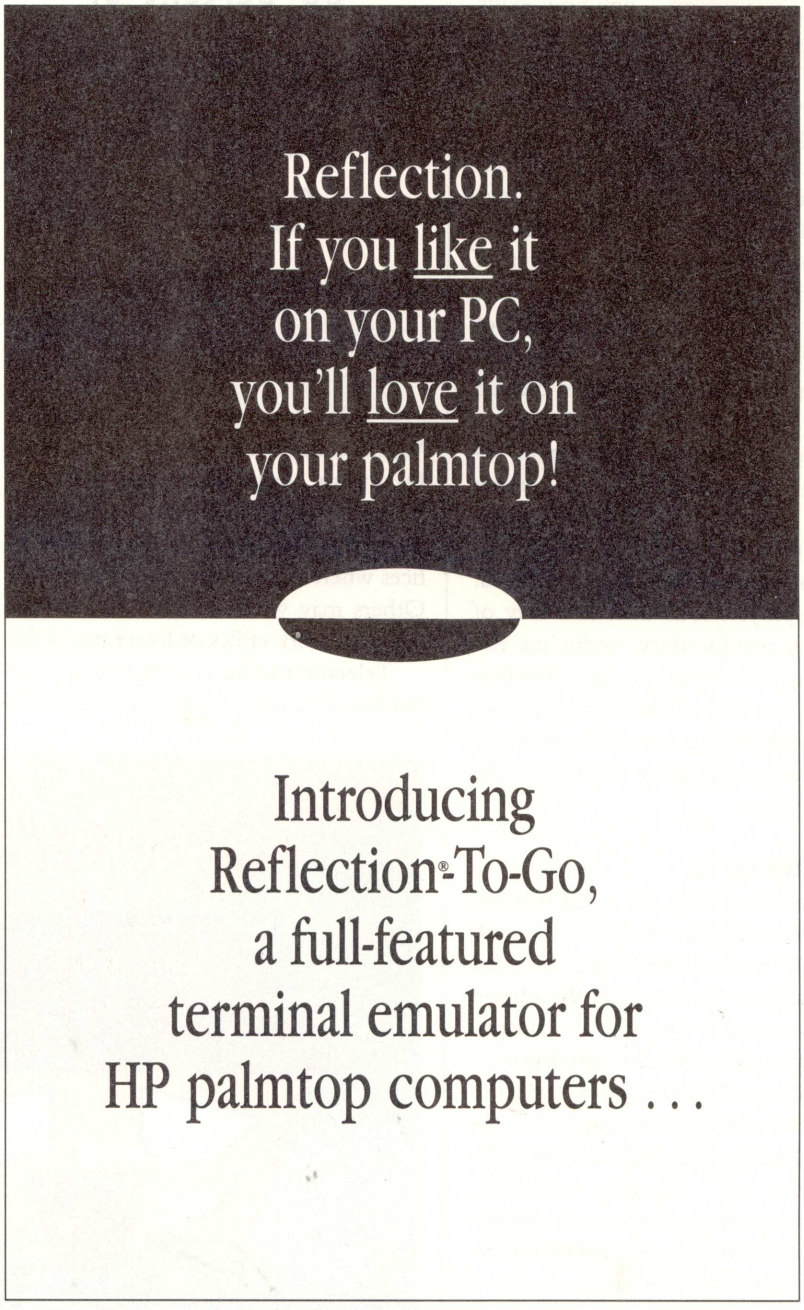

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NETWORKING

Tim Cahoon

Your Place Or Mine?

The technology now exists for us to work at home or remote offices. But what are the real benefits and problems of doing just that?

Telecommuting is a term arising out of the concept of Home Based Employment (HBE) which began with the Homebound Employment Project of 1969. The Homebound project was funded to demonstrate the feasibility of disabled workers working from their homes. In 1973, Dr. Jack Nilles created the term "telecommuting" to describe a person working at home or a satellite office, and communicating with the home office by telephone or computer system.

Since then, interest has steadily grown in telecommuting for various reasons. Some employers look at it as a way of increasing productivity, reducing expenses and conserving energy. Workers look at it as a way of increasing personal time by eliminating commute time and giving them much more flexibility with their schedules.

Who's Doing It

Telecommuting starts for many reasons. The most common is to provide a perk to valuable, trained employees who need some flexibility. In this case, the option to telecommute is brought to management as a request from the employee.

Reduction of business costs is another reason why companies pursue telecommuting. Rather than build a new addition onto an existing building, telecomuting allows business to distribute their work force into smaller less expensive "satellite" buildings across a diverse geographic area.

Using these satellite offices allows companies to expand the pool of workers from which to hire. Offices can now exist where the work force is located. Workers now can be located in North Dakota or Mississippi, while the headquarters is in metropolitan Detroit. Some businesses may opt to establish small offices where mass transit is easily available. Others may want workers with certain types of work ethics or lower pay scales.

88 percent of telecommuters were managers or professionals who worked at home.

Telecommuting can also be a competitive advantage. Highly skilled professionals are likely to view telecommuting as a benefit. Because these individuals may live across the country, allowing them to telecommute could prove to be an important advantage in recruiting.

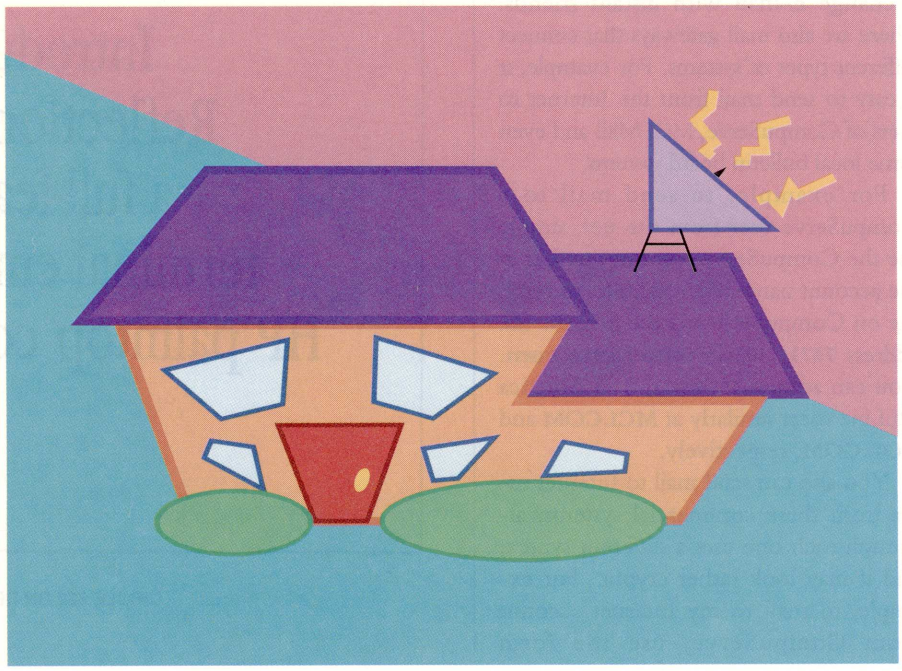
Telecommuters are generally mid-level managers or professionals. Known as "guerrilla telecommuters," this group already has some flexibility in their schedules that allows them to easily become telecommuters.

A 1989 study by Kathleen Christensen showed that 88 percent of telecommuters were managers or professionals who worked at home. The remaining 12 percent were clerical workers located in satellite offices.

Managing the Telecommuter

Many managers find that managing telecommuters is very difficult. If they can not see the employee how do they know the work is getting done?

To overcome this fear, managers must



set goals and objectives for the telecommuter. They then must monitor progress and evaluate performance based on the product not the person.

The manager must also work out appropriate schedules for communication with the telecommuter. Whether it is by telephone or E-mail, the manager needs to establish times when the telecommuter can be reached. This eliminates the perception that the telecommuter is at the beach if the manager can not reach them by telephone.

Schedules must also be worked out for the telecommuter to work at the main office rather than the remote location. This provides the manager and telecommuter time to talk face-to-face and lets the telecommuter get in touch with his coworkers. Working at the office could be done once a week or once a month, depending on the kind of job performed.

Telecommuting is not for everyone. Many people like a structured environment away from home. Telecommuters tend to become the invisible employee.

Telecommuting is not a solution to childcare. Successful telecommuters have enough office space and no little children running around. Telecommuting should let you work with your childcare plan, not be a substitute for it.

Human Resource Policies

Here are some key points your Human Resource Manager (HRM) should consider when setting up a telecommuting policy.

In large companies, it is better to let the local offices and plants manage the program by themselves. Don't try and mandate it from the corporate headquarters. The corporate HRM staff should guide, not dictate.

Telecommuters should be considered full employees, not independent contractors. They are to be given the same wages, benefits and chances of promotion as any other employee. Avoid the trap of using piecework rates (keystrokes, pages typed and so on) for work that is paid hourly or salaried in the office. Don't let managers hide their poor management skills behind Personnel policy.

Any policy developed should also specify what equipment is to be used by the employee, who owns the equipment and what expenses are covered.

And finally, only let people who have been with the company for a period of time join the program. This insures that they understand the corporate culture, have established a relationship with their manager and have received the training they need to accomplish their work from outside the office.

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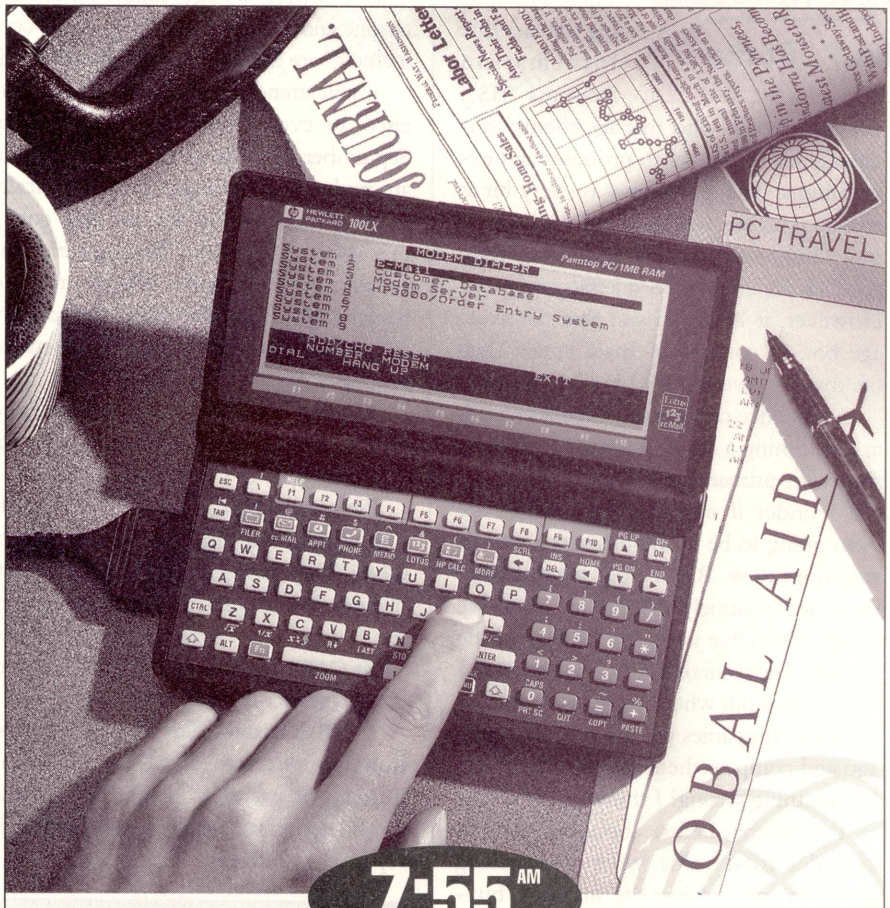

Jim sighed. With just minutes to catch his flight, the boss wants the memo he wrote yesterday! Good thing he has Reflection-To-Go® on his HP palmtop computer.

Reflection-To-Go is a full-featured Reflection® terminal emulator, complete with modem dialer and command language, on a PCMCIA card. Thanks to Reflection-To-Go, Jim logs on to the HP 3000 right from the airport. Because Reflection-To-Go works with PCMCIA and external modems, as well as direct serial connections. Jim uses HP DeskManager, works on block-mode applications, and even transfers files over the phone. (Like a letter composed in Memo Editor.)

"Now boarding Flight 7..." Jim smiles to himself. The memo is on its way.

The moral? Make a note: if you have an HP 100LX or an HP 95LX, Reflection-To-Go helps you work smarter.

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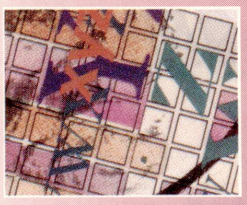

MANAGING YOUR HP 3000

John P. Burke

Embrace Politically Correct Buzzwords And Contribute To "Record CIO Turnover"

Reality Check

There's no hiding the fact that Information Systems (IS), and the people who manage them, continually fail to live up to promises and expectations. The technology is every bit as wiz-bang as we could have imagined — new, improved hardware and software products are introduced at a staggering rate. However, it has been said that the average box of corn flakes has a longer shelf life than the average CIO has job tenure.

It was once considered prudent to work at establishing a good, long-term relationship with primary vendors. Now, we often wonder if our primary vendors are even going to be in the business a year or two from now. Remember when equipment was routinely depreciated over five years? When five years was considered the average useful lifetime for a software system? Check out who the top hardware and software companies were five and 10 years ago and compare them with a current list. Is something wrong? I think so.

I've written before about the need to consider total value when purchasing products and not just the initial or buy-in price. Clearly this is part of the problem. But there is more.

No Luddite Here

Change is generally good. Necessary in fact. I believe strongly in the need for continual, evolutionary change in IS. For many years, I and others, bemoaned corporate IS' resistance to change. I was writing and talking up online systems, and defending them to auditors, when many big IS departments were congratulating themselves on doing away with punched cards.

Knee-jerk change in reaction to some real or imagined stimulus is, on the other hand, almost always bad. Bad for you as a manager and bad for your organization. That is where we are today. Knee-jerk change and the IS version of "political correctness" are driving the industry off a cliff.

If you attended INTEREX in San Francisco, or even if you spent the week of September 20 chained to your desk, you are probably no stranger to the politically correct buzzwords of the mid-90s: enterprise-wide integration, client-server computing, open systems, object-oriented programming, graphical user interfaces, artificial intelligence, outsourcing, structured programming, CASE ... oops!

It seems my mind short circuited and started disgorging topics from yesteryear. CASE, a topic of yesteryear? You bet.

Two years ago, every computer trade publication was singing the praises of CASE. Companies selling CASE products or concepts were sprouting up all over the IS landscape. Where are they now? Most CASE companies are now hanging on by their corporate fingernails.

CASE was oversold. Many organizations bought into CASE in a big way thinking it was the "magic bullet" that would eliminate backlogs and reform IS' reputation. Wrong!

Live To Compute Another Day

The large number of MPE/V systems still in productive use, plus their continued reliability and maintainability, convinced HP to extend the "end of hardware support" date on most systems to at least April 1, 1995. Further extensions are possible.

HP will notify customers under support agreements at least one year in advance of terminating contractual support. Once a product reaches "end of hardware support," support is available only on a time and materials basis as a "best effort" offering.

You don't see many user testimonials or success stories for CASE anymore. That doesn't mean CASE should be abandoned, but it needs to be considered realistically and pragmatically as a tool for IS — not as a panacea.

In the late 1970s, I had a program called BUZZWORD, which would spit out random three-word phrases that were grammatically, syntactically and logically correct, but essentially nonsense. I can't prove it, but I wouldn't be surprised if some of today's techno-babble was the result of BUZZWORD.

Buzzword Du Jour

Which brings me to one of the current billion-dollar buzzwords: client-server. Or is it client/server? Or, simply, client server? And, is it the same as cooperative computing?

What's this? Blasphemy? If I'm not "doing" client-server, I must be hopelessly mired in some computing backwater. A prisoner of (ugh!) legacy systems.

Am I supposed to take a technology seriously that doesn't even have a universally agreed upon spelling? Not to mention definition — I recently spent some time debating whether a GUI front-end on a legacy system was an example of client-server.

Yet, next to open systems, client-server is the most politically correct phrase in the industry. However, it isn't the ultimate solution to the problems of IS. And it may not even be a solution at all in many cases.

Keep in mind who promotes the politically correct technologies: the vendors and consultants who stand to gain the most. If P. T. Barnum were alive today, he would own a software company with a significant side business in consulting.

Bill Gates seems to understand. Did you ever wonder why if the Windows

interface is so intuitive, does Windows 3.1 come with a 650 page user manual? And why so many people are making good money selling books and providing training on how to use Windows?

But, I digress. Client-server is a technique, a model for computing. It is not a solution for anything except using up all those idle desktop mips. And, as with any new technology, it is expensive, risky and not at all easy to be on the bleeding edge.

Consider the many legacy systems that are doing the job they were meant to do. Scrap them as the client-server missionaries preach? Throw away your investment? For what? The "promise" of great savings? I should hope not! Because the savings are still mostly illusory.

No Magic Bullets

We never learn. Our industry, which probably mirrors the American psyche these days, is constantly in search of the quick fix, the "killer app," the "big score." Every year brings with it new "magic bullets" that ultimately turn out to be rubber, bouncing back at us, giving us a black eye. Let's get smart.

Increasingly, managing your HP 3000 is going to become the task of managing software vendors and consultants, being your own systems integrator. With care you can avoid the twin pitfalls of vendor vaporware and consultant vapor-knowledge.

Of course, you can continue to jump at each new politically correct buzzword and phrase, and you will contribute to the headlines screaming about "... record CIO turnover ...."

Would you like to continue to see articles on this topic?
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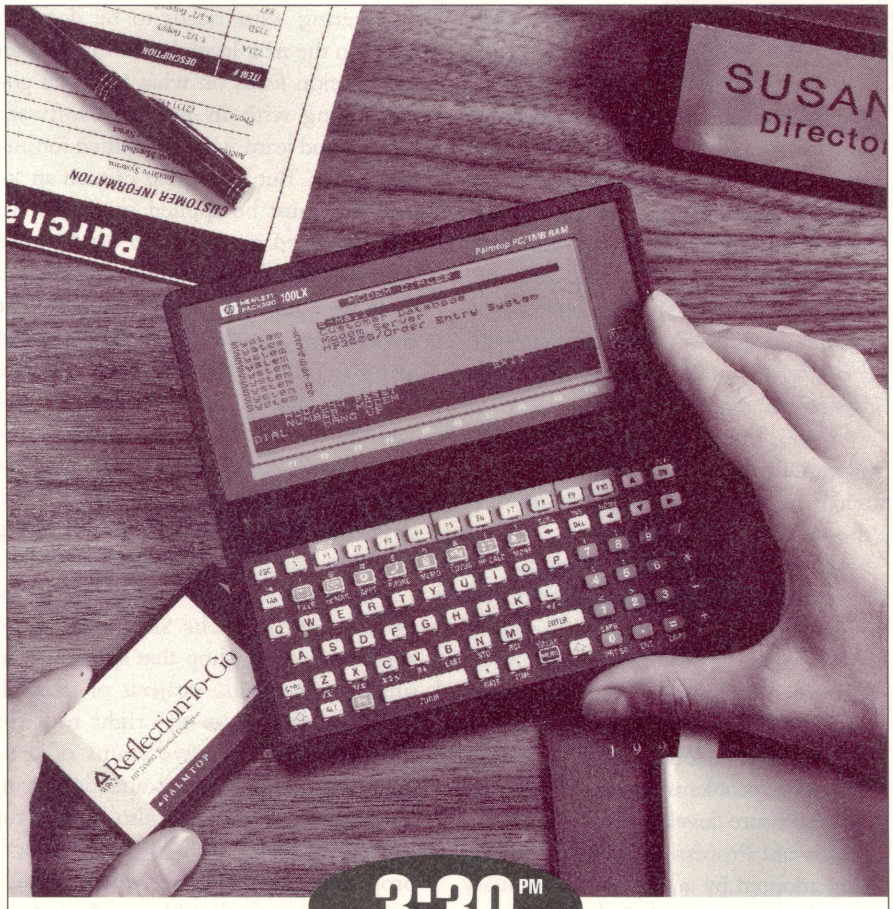
yes 304 no 303

Two "Don't Miss" Events:

Even if you were at INTEREX'93, the November 18 "HP 3000 Strategic Directions" video conference is a don't miss event. The first in this series of video conferences was held in the spring and was extremely well produced. The second should be even better. If you can't make it live, a videotape will probably be available.

If you have a Classic HP 3000, the question is not should you migrate from MPE to MPE/iX, but when will you migrate. Despite the fact that migrating from MPE/V to MPE/iX is the easiest conversion in industry history, it can't hurt to collect as much information as possible. To that end, the December 14 "How to Migrate from MPE V to MPE/iX" audio conference is a must. Listen in on a speaker phone from the comfort of your office or conference room.



3:30 PM

Jim felt his stomach tense. Two months' work is riding on this sale, and finally he is in the client's office. Then the client asks, "How soon can you deliver?"

Success! Thanks to Reflection-To-Go® on his HP palmtop computer, Jim has the answer—straight from the HP 3000. "The order will ship tomorrow."

Reflection-To-Go lets Jim dial in to the HP 3000 anytime. Even when it's 3:30 p.m. on the West Coast, and the East Coast office is closed. Reflection-To-Go is a complete Reflection® terminal emulator that uses state-of-the-art PCMCIA technology. It fits on a credit-card sized card. Now, Jim works on block-mode applications, checks HP Desk messages, or transfers files from almost any phone—without packing any extra baggage.

The moral? Stay in touch: if you have an HP 100LX or an HP 95LX, Reflection-To-Go helps you work smarter.

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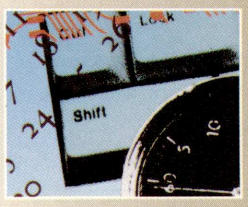

OBJECTIVELY SPEAKING

Richard Riehle

Software Process Modeling Solves Day-To-Day Software Developement Problems

Climbing The Maturity Ladder

This past August, the SoftwareEngineering Institute (SEI) held its annual Software Engineering Conference in Pittsburgh, Pa. For anyone with a compelling interest in state-of-the-art software engineering, this was the conference to attend. Not only is Pittsburgh home to the SEI; but a SEI neighbor, Carnegie Mellon University, is one of a handful of educational institutions offering an Master's of Science in Software Engineering.

A major theme of the conference was Software Process Modeling, the latest hot topic. It is accompanied by the notion of Process Maturity Models.

Anytime a new topic becomes hot, my skepticism sensors become activated. According to F. Brooks, author of *The Mythical Man-month*, "There are no silver bullets for software engineering." In other words, no language, no method, no doctrine, no CASE tool and no lone talented person can solve all the problems we face in our day-to-day software development.

Software Process Modeling is already being adopted by aerospace and military software developers. A few MIS organizations also are beginning to discover it. The most well-known work in process modeling comes from the SEI. The SEI model is based on levels of "maturity" that gauge the effectiveness of software engineering efforts.

Maturity Scale Assessment

The maturity scale is not very granular, so it is easy to see at a fairly high level of abstraction.

If an organization wants to know where it stands on the maturity scale, it can obtain the SEI's questionnaire which includes about 100 entries. It can then have itself rated by a trained analyst from the SEI.

One benefit of maturity assessment is discovering what needs to be done to move to the next level. It also can help an organization focus on what has been going wrong with its previous software projects and learn what is required for improvement. But, the results of such an assessment must be applied correctly. An inexperienced manager can easily make wrong decisions with correct information.

In his book, *The Decline and Fall of the American Programmer*, author Ed Yourdon quotes Tom DeMarco, one of the founders of structured analysis, "... according to the SEI model, Apple computer should not exist." This is somewhat analogous to the scientific proof that, based on its aerodynamics and wing structure, the bumblebee cannot fly.

As usual, we need to use the right tool for the right job. The SEI model is not appropriate for a shop that specializes in small programming projects or research software. It can be the right tool for projects which involve teams of programmers, large projects and significant budgetary constraints. It also is good for companies which do a lot of "contract" programming, and those which produce software as a marketable product. Last, but not least, it is definitely appropriate in environments where a long life cycle (including maintenance) is associated with the software process.

Level 1 — Initial. Most organizations are at this level. It is the "star programmer" level. Each programmer has their method of getting the job done. It suffers from non-predictability of schedule as well as wild variations in the quality of the final product. Forget the budget. The system will cost what it costs. Forget the deadline. Everyone knows that software cannot be rushed. It will get done when it's done, or at least when I say it's done, or when you tell me I'm done by forbidding any further time or effort on it.

Level 2 — Repeatable. At this level, the organization has decided that it ought to have some schedules and budgets. The tools are not very advanced, and certainly not specific to software engineering. Often the staff has been given training in methods, has been ordered to follow the rules learned in that training and most people will do things the same way as long as it's convenient.

Where Level 1 maturity is dependent on the star programmer, Level 2 may be dependent on the star project manager. Under Level 1, if the star programmer leaves in mid-project, chaos will prevail. Under Level 2 maturity, the project team will fall into disarray when a new star manager replaces the current star. Level 2 organizations are excellent for small work-groups that can be controlled and managed by a technically proficient leader who can get involved in each detail, solve technical problems and promote team spirit. If that manager is replaced by someone of lesser technical skills, there is likely to be a decline in productivity and quality.

Level 3 — Defined. A Level 3 organization is more dependent on its managerial policies than on its stars. There is more emphasis on process, methods and tools. Formal standards for testing, development, design and quality assurance are in place. These standards are written, codified and followed. A Software Configuration Management (SCM) process is now applied at all phases of the project, starting back at the requirements definition stage.

A Level 3 organization is in a good place to incorporate some CASE technology into its process. It can assess what automated tools will best meet the goals and policies defined for its formal process standards. Also, a Level 3 organization will

have formed a group or committee to monitor and manage the documentation and development of the process throughout the software organization.

Level 4 — Managed. The important feature of this level is its rigorous use of software metrics. The purpose of these metrics is to improve the process model. In many cases, the Software Quality Assurance group will be charged with installing a comprehensive metrics program. The metrics must be numeric, and used to manage quantifiable goals, plans and quality. The metrics are tracked throughout the life cycle of each software project.

Level 5 — Optimizing. This level is a direct outgrowth of Level 4. Management uses the metrics gathered from past projects to improve the software engineering process. To quote Watts Humphrey, author of *Managing the Software Process*, metrics provide a "foundation for continued improvement and optimization of the process."

Reaching the Next Level

If you are now at Level 1 and have made the decision that next month you will convert to Level 5, hold on. Most specialists in process modeling agree that you must progress from one level to the next in an orderly manner. You can certainly plan a course of progress, but make it realistic and consistent with your organization's personnel profile. Also, expect resistance. In my experience, no one resists change more vigorously than a computer programmer, unless they become independently fascinated with some gimmick or gadget. It does no good to introduce a CASE tool into an organization currently modeled around the star programmer or manager. Even if others in the organization use the tool, it will never be part of the real development process unless that star endorses it.

The seminar mongers are jumping on this bandwagon. I would recommended starting with the books by Humphrey and Yourdon. Then start attending some conference sessions that deal with this topic. After that, contact the management consulting division of one of the accounting firms or other big-time consultant company. Be prepared for some big-bucks proposals, because these folks see process maturity assessment as a really good revenue source for the next several years.

You might even want to obtain a copy of the SEI questionnaire and do your own assessment. Caution. Self-assessment can be dangerous if you don't learn how to read and correctly interpret the results.

Contact Richard Riehle on the Internet: riehler@ajpo.sei.cmu.edu

Would you like to continue to see articles on this topic?
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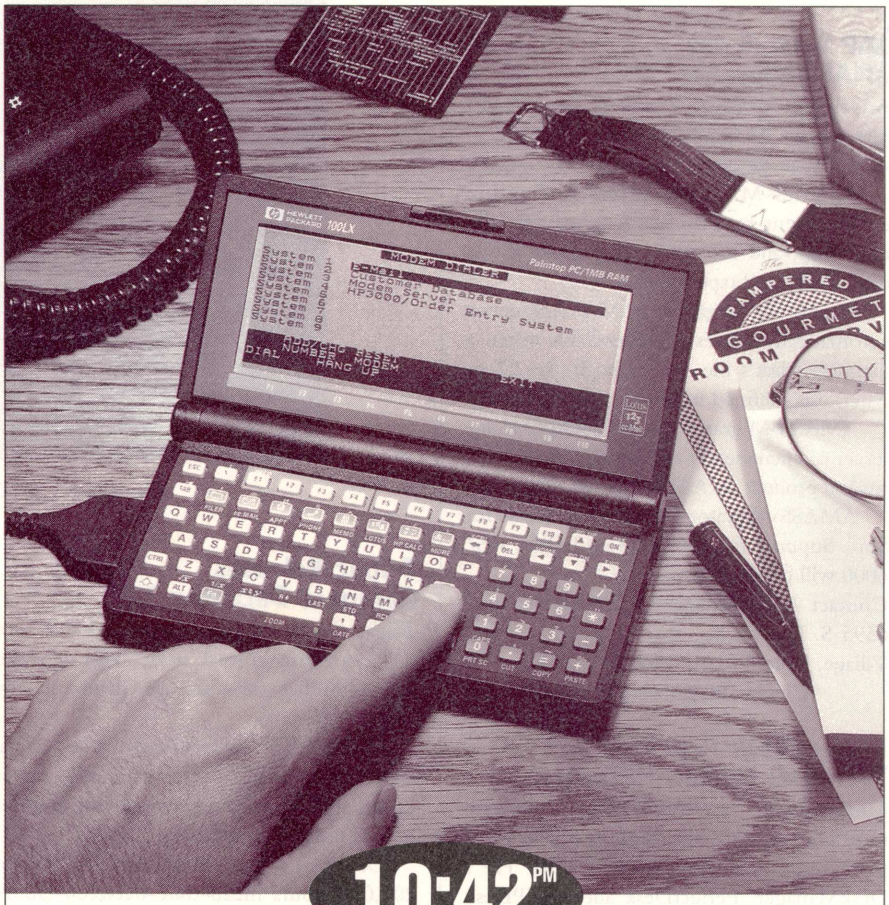

10:42PM

What a day! A long flight, a big sale, and his hotel bed is waiting—but first, Jim checks HP DeskManager.

Thanks to Reflection-To-Go® on his HP palmtop computer, Jim reads his e-mail from the comfort of his hotel room. Or transfers files, or works on block-mode applications. Reflection-To-Go is a full-featured terminal emulator, completely integrated on a PCMCIA card that just pops into the palmtop—you never need to download from a PC!

So . . . the meeting is set for noon and the office needs a reply by morning. A quick hot-key to the Appointment Book confirms his schedule. No conflicts. He hot-keys back to HP Desk. He'll answer now. After all, he has plans for tomorrow morning—he'll be sound asleep.

The moral? Rest easy: if you have an HP 100LX or an HP 95LX, Reflection-To-Go helps you work smarter.

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Reflection-To-Go works with PCMCIA-based modems, external modems, or over a direct serial connection.

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NP

NEW PRODUCTS

AAP Introduces AMASS-Migrator

Advanced Archival Products Inc. (AAP) introduced AMASS-Migrator hierarchical storage management software.

AMASS-Migrator offers a flexible environment by providing transparent file migration, and the ability to directly access optical disk and tape libraries.

During file migration, AMASS-Migrator automatically makes space available when a magnetic disk's file system begins to fill or when user-defined migration criteria is met.

AMASS-Migrator can be configured for server or client-server operation, and runs as a layered product on AAP's AMASS filesystem.

AMASS-Migrator is currently available for Sun. Support for HP 9000 and IBM RS/6000 will be available.

Contact Advanced Archival Products Inc., 6595 S. Dayton St., Ste. 1200, Greenwood Village, Colo. 80111; (303) 792-9700.

Circle 400 on reader card

PerfectDesk Provides Windows Within HPDesk

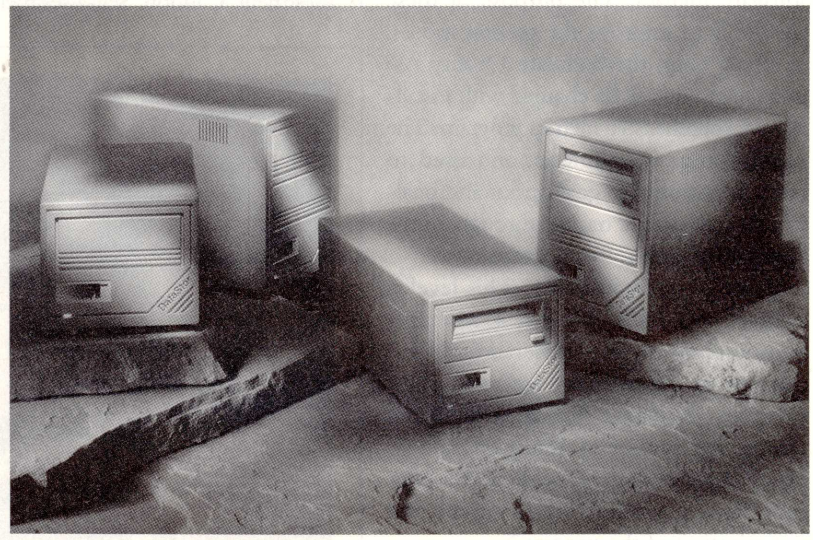
MiniSoft announced PerfectDesk, a software tool that combines the features of PC word processors and spreadsheets with HP's DeskManager. PerfectDesk allows HPDesk users to access their PC word processor or spreadsheet from within HPDesk, and now supports several Windows-based applications in addition to the DOS-based applications already supported.

PerfectDesk allows users to use DOS-based Lotus 1-2-3, WordPerfect for DOS or Windows, or MS-Word for DOS or Windows at the "Workarea>," "Package>," "Message," and ">" prompts to create, edit, read, send and print text, graphics and worksheets from within HPDesk.

Prices start at $1,000 with host and PC modules included.

Contact MiniSoft Inc., 13617 State Hwy. 9, Snohomish, Wash. 98290-9000; (800) 682-0200.

Circle 399 on reader card



DataStor 3.5" is available in single- and dual-box enclosures.

Tripac Releases Compact DataStor 3.5"

Tripac Systems Corp. introduced DataStor 3.5", an integrated mass data storage subsystem that stores up to 8 GB in a six- by 12-inch space.

DataStor 3.5" features hard disk and digital audio tape (DAT) drives from HP and is upgradable to meet increasing data transfer rates and data access times.

DataStor's hard drives provide up to 200,000 hours mean-time-between-failure (MTBF) and up to 2.1 GB capacity per drive. DAT drives provide 50,000 hours MTBF and up to 8 GB capacity with compression.

DataStor 3.5" peripheral storage subsystems are HP 9000-, DEC-, Sun-, RS/6000-, Macintosh-, SGI-, Novell- and PC-compatible. It is available in single-and dual-box enclosures.

Contact Tripac Systems Inc., 5215 N. O'Connor, Ste. 200, Irving, Texas 75039; (214) 432-3550.

Circle 393 on reader card

SE Technologies Offers Data Collection Services

SE Technologies Inc. introduced data collection services to provide its customers with an interface between data collection devices and most major MRPII applications.

Using a mixture of hand-held and standard data capture terminals, SE Technologies has recreated many of the standard MRPII transactions for greater control in the areas of goods inward, dispatch, cycle counting, work order tracking and kitting.

Contact SE Technologies Inc., 15 Bank Street, Stamford, Conn. 06901; (203) 357-1772.

Circle 396 on reader card

Group 1 Announces CODE-1 Plus/UNIX

Group 1 Software announced the release of CODE-1 Plus/UNIX for field testing. The new product will initially be usable with the HP 9000 and IBM RS/6000 computer platforms.

CODE-1 Plus allows mailers to standardize and correct U.S. addresses and confirm, correct or add postal codes, including carrier route, ZIP+4 and delivery point codes, according to U.S. Postal Service (USPS) conventions. By validating postal codes and addresses, mailers can comply with USPS automation requirements for business and third-class mail and secure substantial discounts in postage.

Reader Information

This month's issue contains many advertisements for hardware and software products available for your HP systems. Your investment in these products today could mean a more lucrative future for your company. Use the information below to learn more about the advertisers' offerings, then use the reader information card to initiate your direct link to valuable information about these advertisers' products.

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Abtech specializes in new and remarketed 3000, 9000, and 1000 series Hewlett Packard equipment. All systems and peripherals are thoroughly tested and/or refurbished to exceed HP's maintenance requirements. To receive a quotation or a copy of our Newsletter, THE PULSE, **please contact Abtech at 800-HP-HRDWR.**

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CIRCLE 200
Hewlett-Packard approved product developer specializing in MICR printing (magnetic ink character recognition) for producing checks from Accounts Payable, Payroll and Claims applications. **Call (800) 347-3638.**

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CIRCLE 104
The Adapter/Manager for IMAGE/3000 databases allows the manipulation of database objects with a wealth of action. **Call (208) 726-8191.**

ALDON COMPUTER GROUP
CIRCLE 163
Change management, quality assurance and program testing software. **S/COMPARE HARMONIZER, ANALYZER. Call (800) 825-5858**

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CIRCLE 242
Artecon is a leading systems integrator and manufacturer of value-added hardware and software products for the UNIX marketplace. Product lines include: Opticals, Removables, Backups, Storage and Accessories. **Call (800) USA-ARTE, FAX (619) 931-5527.**

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Removable mass storage solutions, including hard disk drives, magneto-optical erasable drives, and high-capacity tape backup for HP 3000/9000/1000 computers. **Call (800) 237-4641, (408) 379-6900**

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CIRCLE 108
Your total HP 3000/IMAGE database solution that includes: DBGENERAL, the most complete general-purpose database utility available in the HP 3000 market. And SUPERDEX, the fully compatible indexing package that provides unprecedented data retrieval speed and flexability. Both are reasons why Bradmark is committed to provide premier data management solutions. **Call (800) ASK-BRAD.**

COGNOS CORP.
CIRCLE 117
Cognos provides application development software for HP MPE V, MPE XL and HP-UX platforms. **Call (800) 4-COGNOS.**

COMPUTER SOLUTIONS INC.
CIRCLE 167
Computer Solutions is an HP Channel Partner now in its 25th year of operation. Businesses include disaster recovery services, outsourcing, hardware sales, contract maintenance, depot repair and school software. **Call (201) 672-6000, FAX (201) 672-8069.**

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Broad line of HP mass storage (disk, tape, optical) and RAM memory upgrades for HP, Apollo, DEC, SUN, RS/6000 and Silicon Graphics computers. Best prices, availability, warranty and support. **Call 1-800-359-0282 for complete information and pricing.**

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Falcon Systems Inc. is a supplier of UNIX workstation upgrade and enhancement products, as well as a UNIX system integrator and Hewlett-Packard reseller. Products include: memory, disk, tape, optical and mass storage solutions, such as RAID, disk arrays, optical jukeboxes and tape jukeboxes. Also, SCSI, SCSI-2, Fast SCSI-2 and differential disks, all backed by the best warrantees in the business. **Call (800) 326-1002.**

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Reasonably priced data storage subsystems with performance in mind. **Call (313) 548-2001.**

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Affordable hardware solutions, from memory boards and interface cards to the latest in optical disk technology. **Call (303) 223-6071 or (800) 321-4671.**

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With job management and MIS productivity products from NSD, your HP 3000/9000 will run smoother, faster and better. **Call (415) 573-5923 or (800) 538-3818.**

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Pericom Inc. is a supplier of terminal emulations software for MS-Windows and the X Windows environment. Some of our emulations include DEc VT820-840 and 420, Tektronix color graphic terminals, Prime, Data General, and Tandem. **Call (609) 895-0404.**

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Complete line of quality peripherals, including disk, tape and optical drives, connectivity and I/O devices, mass storage libraries. **Call (714) 777-3478.**

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Complete range of mass storage devices and their peripherals for HP 3000, 1000 and 9000 from ISA. **Call (713) 493-9925, FAX (713) 493-2924.**

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VITAL SOFT INC.
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VISIMAGE, the end user report writer for the HP 3000 market. StarJet, the electronic forms solution for your HP LaserJet. VISIMAGE and StarJet can be sold independently. **Call (800) 7VITALSOFT for free demo.**

WRQ (WALKER RICHER & QUINN)
CIRCLE 263
Makers of Reflection Series Software. HP terminal emulation for PCs and Macintoshes. **Call (800) 872-2829.**

HP Professional

**The publisher does not assume any liability for errors and omissions.*

Contact Group 1 Software, 4200 Parliament Place, Ste. 600, Lanham, Md. 20706-1844; (800) 368-5806.

Circle 391 on reader card

BusLogic Introduces Paragon 4.0

BusLogic announced disk array software for NetWare 4.0. Paragon Disk Array Software Release 4.0 for NetWare 4.0/3.11 has been enhanced to provide a substantial increase in disk array reconstruction performance and a remote diagnostics capability designed to help network administrators monitor disk array performance and functionality.

A Smart Update function has been added to the software giving it the intelligence to determine which information on the array needs to be updated, and to update only that information.

Using Paragon 4.0, network administrators can analyze a disk array's performance by monitoring disk array operations from anywhere on a LAN or from a remote site via a modem and a workstation.

Contact BusLogic Inc., 4151 Burton Dr., Santa Clara, Calif. 95054; (408) 492-9090.

Circle 389 on reader card

Los Altos Software Offers Fastrack 3000

Los Altos Software announced Fastrack 3000, a software package that provides sales and marketing professionals quick access to the information they need.

Fastrack 3000 provides key management reports that forecast sales, evaluate products, analyze sales representative performance, examine sales cycles and disclose the cost-effectiveness of marketing programs.

It also gives a push-button lead history, follow-up calendars, online telemarketing and letters. Fastrack can handle batch loading and archiving of leads.

The database can be divided, restricting each segment to only its own leads. The user can also receive all application source code at no extra charge.

Contact Los Altos Software, P.O. Box 639, Los Altos, Calif. 94023-0639; (415) 941-6030.

Circle 388 on reader card

DSO Manager Increases Productivity

FemtoTek announced DSO Manager, a productivity tool for controlling a Leader Instruments Model 3100D Digital Storage Oscilloscope (DSO) from a GUI on a DOS PC using a mouse. Based on LabWindows software from National Instruments, DSO Manager is available as software only or as a complete system, which includes a National Instruments GPIB interface board.

With DSO Manager, engineers and scientists have complete functionality for storing, comparing and documenting waveform data. With pop-up screens and menus, users can perform all standard oscillosocpe functions including reading and setting front panel settings, transfering waveforms to and from oscilloscope, plotting waveforms to a graphical printer and computing the spectrum of stored waveforms.

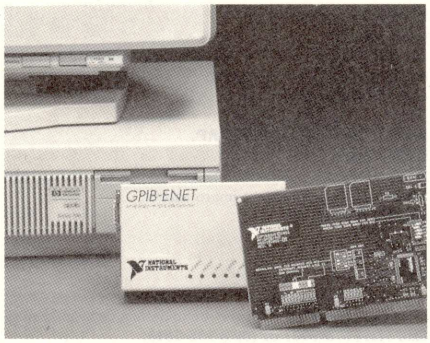
The software-only version costs $595. The DSO Manager System (including the National Instruments GPIB-PCII/IIA or AT-GPIB interface board) cost $945 and $1,045, respectively.

Contact FemtoTek Inc., 560 Fellowship Rd., Mount Laurel, N.J. 08054; (609) 235-4435.

Circle 387 on reader card

IEEE 488 Instruments Connected To HP 9000/700s

National Instruments announced two kits that connect HP 9000 Series 700 EISA workstations to IEEE 488 (GPIB) instruments. Engineers and scientists can use the National Instruments GPIB-HP700-AT high-performance plug-in controller board or the GPIB-ENET/HP external interface kit with the HP 9000 Series 700 workstations in including automated testing and laboratory automation.



GPIB-HP700-AT and GPIB-ENET/HP connect IEEE 488 instruments to HP 9000 Series 700s.

The GPIB-HP700-AT is an IEEE 488.2 interface for HP 9000 Series 700 workstations with EISA slots. The NAT4882 and Turbo488 ASICs make the GPIB-HP700-AT a maximum-performance IEEE 488.2 interface board. The NAT4882 chip performs the basic IEEE 488 Talker, Listener and Controller functions, as well as all of the Controller functions for the IEEE 488.2 standard. The GPIB-HP700-AT includes high-level NI-488.2M software for HP-UX version 9.01 and above.

The GPIB-ENET/HP kit controls IEEE 488 instruments from an HP 9000 Series 700 Ethernet host with access to a TCP/IP network. GPIB-ENET can be used to share GPIB peripherals between networked users. The compact GPIB-ENET also has an internal power supply and includes high-level NI-488.2M software for HP-UX.

The GPIB-HP700-AT costs $695 and includes NI-488.2M. The GPIB-ENET/HP costs $1,595 for the AUI/Twisted Pair version and $1,695 for the AUI/Coaxial version.

Contact National Instruments, 6504 Bridge Point Pkwy., Austin, Texas 78730-5039; (512) 794-0100.

Circle 385 on reader card

SmartLeaf/Compare Includes Improved User Interface

DataBase Publishing Software Inc. (DPS) announced version 3.0 of SmartLeaf/Compare, its document revision, comparison and archiving software, for use with Interleaf electronic publishing software.

SmartLeaf/Compare automates document revision production cycles by generating marked-up copy highlighting the differences between document versions. Compare also gives the user a list of changed pages so that an entire document does not have to be searched to find where the changes have occurred.

In addition to the user interface, Compare 3.0 includes an enhanced comparison "engine," with improved evaluation of the differences between types of document revisions.

SmartLeaf products are available on HP Apollo 700 series, Sun SPARC, DEC VAX/

VMS and Ultrix, and IBM RS/6000 workstations. Price is $4,995.

Contact DataBase Publishing Software Inc., Ste. 5300, 400 W. Cummings Park, Woburn, Mass. 01801; (617) 938-0018.

Circle 394 on reader card

PacRim Offers Floppy For HP OmniBook 300

PacRim introduced P35, a compact 3 1/2-inch, 1.44 MB/720 KB external floppy drive for the HP OmniBook 300 computer. The P35 connects to OmniBook's parallel printer port and has a pass-through printer port to allow simultaneous usage of a printer and the floppy diskette.

An optional battery pack allows the drive to be used anywhere the OmniBook can. The drive can be connected or disconnected from the OmniBook at any time without rebooting the computer.

Price is $199.

Contact Pacific Rim Systems Inc., 2655 Barrington Ct., Hayward, Calif. 94545; (510) 782-1013.

Circle 383 on reader card

Facit's D7165 Features HP LaserJet Emulation

The Facit Division of Ahearn & Soper Co. Inc. introduced the D7165, an industrial grade continuous form laser printer. The D7165 provides emulation for the HP LaserJet Series II.

The D7165 is a compact, desktop printer that feeds a variety of pin-fed paper and label material at up to 1,000 lines per minute. Its fast speed, 300 x 300 resolution, graphics capability and straight paper path enables it to serve dual functions — as a bar code label and a data processing report printer.

Price is $5,100.

Contact Facit Division, Ahearn & Soper Co. Inc., 400 Commercial St., Manchester, N.H. 03101-1107; (603) 647-2700.

Circle 382 on reader card

Program Provides Access To HP LaserJet Fonts

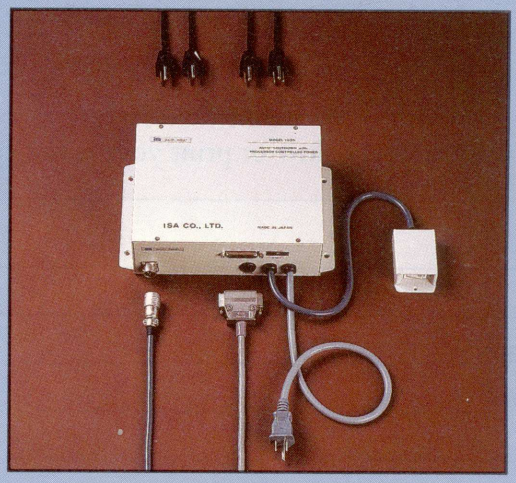
Succint Systems Inc. introduced SizeIt for LaserJet III and LaserJet 4 compatible printers. SizeIt is an MS-DOS and OS/2 productivity tool which provides easy access to built-in scalable fonts. It provides easy access to all built-in LaserJet III's and 12 of LaserJet 4's typefaces.

Special features offered by SizeIt include: banishing the "typewriter look" from all printed work; printing "read me" and other text files two-up to save paper; fitting printout to an exact number of pages; putting as many as 180 lines per page; the ability to try another font, size or page orientation in less than a minute; and preparing overhead projection transparencies directly.

Minimum system requirements for SizeIt are any PC-compatible supporting standard 25 x 80 character display modes, MS-DOS 2.1 or OS/2 2.0.

Startup & Shutdown Security

UNIX CONTROL DEVICE



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Thank you. *Your request will be processed immediately.*

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101 Witmer Road ▶ Horsham, PA 19044 ▶ 215.957.1500 ▶ FAX 215.957.4264

11/93-D

Single user price is $49.95.
Contact Succint Systems Inc., P.O. Box 281, Norwich, Vt. 05055; (800) 639-3711.

Circle 381 on reader card

Computer Power Offers Price Reduction

Computer Power Inc. released its newly priced Trimax II smart series Uninterruptible Power System (UPS). The Trimax II three-phase, double-conversion, online UPS is now priced up to 36 percent less.

It provides continuous power protection for mainframe and mini-computer systems, telecommunications systems, process controllers and medical electronics. Fourteen different power ratings are available to handle loads from 10kVA to 420kVA.

Other features include true sine wave PWM output, 98 percent efficiency and complete utility power line conditioning.

Prices begin at $23,986.
Contact Computer Power Inc., 124 W. Main St., High Bridge, N.J. 08829; (800) 526-5088.

Circle 379 on reader card

XVT Announces PowerObjects

XVT Software Inc. announced XVT-PowerObjects, which are custom controls that the GUI developer incorporates into a user interface to provide powerful high-level functions in less time than it takes to create them from scratch.

Table objects include horizontal and vertical scrolling and rules, column headings, and setable line height, column width and margins.

Spreadsheet objects are more advanced table objects that provide most of the table manipulation capabilities of a spreadsheet program.

Toggle/picture button objects combine text or a bitmap with an iconic button that has a 3D sculptured appearance.

The toolbar is a window with rows or columns of toggle buttons, standard controls or user-developed custom controls.

The status bar is a text window that can be updated by other GUI objects.

Price for the XVT-PowerObjects Library is $395 on PCs and $495 on workstations.
Contact XVT Software Inc., 4900 Pearl East Circle, Boulder, Colo. 80301; (303) 443-4223.

Circle 395 on reader card

StarWare Links HP With IBM

StarWare Inc. announced a HP version of its StarWare connectivity software for connecting HP UNIX system-based computers with IBM midrange computers, including the AS/400, S/36 and S/38. StarWare software runs on HP 9000 Series 800 business systems and servers, and HP Apollo 9000 Series 700 workstations.

The StarWare connectivity software includes three products: Star5250, a software

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CIRCLE 472 ON READER CARD

emulator that runs on the HP 9000 which allows users to open windows that emulate the IBM 5250 terminals; StarTools, a set of utility programs that implements bi-directional data flow between the HP and IBM midrange systems to enable file transfer, remote command execution and remote print spooling; and StarMail, an E-mail gateway that enables E-mail interchange between UNIX Mail and OfficeVision.

StarWare products communicate with IBM midrange processors using HP's Systems Network Architecture (SNA) connectivity software products — SNAplusLink and SNAplusAPI.

Contact StarWare Inc., 2150 Shattuck Ave., Ste. 204, Berkeley, Calif. 94704; (510) 704-2000.

Circle 378 on reader card

IDSI's OPEN 3000 Moves HP Applications

IDSI announced OPEN 3000, which moves COBOL applications from MPE-based HP 3000 systems to UNIX. It combines an automated conversion service with a suite of utilities that reproduce the necessary MPE capabilities.

The main function is the automated conversion of HP COBOL to an industry-standard complier such as MicroFocus or AcuCOBOL. Applications can be maintained under both MPE and UNIX concurrently, from a single set of source code.

Also available is Video View, a modernized implementation of VPlus for open systems. It includes all VPlus capabilities and adds pull-down menus and pop-up windows.

OPEN 3000 provides migration of data from TurboIMAGE to SQL packages, specifically Oracle and Informix.

Contact International Digital Scientific Inc., 28460 Avenue Stanford, Ste. 100, Valencia, Calif. 91355; (805) 295-1155.

Circle 377 on reader card

TSA Named HP Authorized Rental Company

Technical & Scientific Application Inc. (TSA) and HP entered an agreement establishing TSA, which has specialized in the rental, resale and lease of HP workstations and peripherals for over eight years, as an HP authorized rental company.

William Smith, president of TSA, maintains this agreement "allows [TSA] to compliment its rental department with the latest workstations, such as HP 9000, 755, 735, 725 and 715."

All equipment is available for short-or long-term rental and six-or 12-month lease/purchase programs.

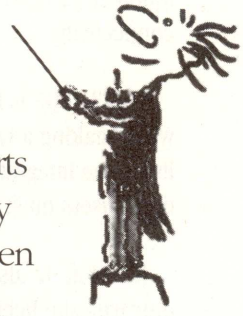
Contact TSA, 2040 West Sam Houston Parkway N., Houston, Texas 77043, (800) 422-4872

Circle 376 on reader card

Thanks to Harmonizer, over 1400 Aldon customers are humming a new tune about installing new packaged software releases.

A classic from the Aldon repertoire. Harmonizer.

Harmonizer allows you to make modifications to your software applications and still take advantage of new releases. In fact, Harmonizer can save you 60-80% of the time you now spend putting up new releases.



Harmonizer identifies and reports all changes made by you and by the vendor on a new release, then merges your changes with the new release to create new production versions of your programs. It's that simple.

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CIRCLE 163 ON READER CARD

Kenan Technologies Announces Multiway

Kenan Technologies announced the availability of Multiway. It combines a multidimensional database with a 4GL optimized for development of large scale analysis and reporting applications.

Multiway is a component of Kenan Technologies' Acumate product family, which supports end-user access to corporate data and provides a comprehensive environment for data integration, application development, data analysis and reporting.

Multiway features a multidimensional database engine with support for unlimited dimensions and positions, intelligent time handling, sparse matrix handling, scalability for industrial sized data and the flexibility to make structural changes on the fly; a powerful modeling language; and true client-server implementation with an open API, shared processing and support for multiple users, platforms and standards.

Contact Kenan Technologies, One Main St., Cambridge, Mass. 02142-1517; (617) 225-2224.

Circle 375 on reader card

CCS/C 1000-PC Speeds RTE-A Program Development

Corporate Computer Systems (CCS) announced CCS/C 1000-PC, an MS-DOS cross-platform development environment for RTE-A.

Users can now use any MS-DOS computer to compile C source programs to produce RTE-A format object modules. The resulting MS-DOS files can be directly linked on your A Series machine using the standard HP RTE-A linker and HP's RTE libraries. This product provides the following benefits: fast compile times, full access to MS-DOS-based tools and utilities for program development B, no need to invest in expensive A900 or A990 development systems and no waiting to use the development system for compiles.

Contact Corporate Computers Systems, 33 W. Main St., Holmdel, N.J. 07733; (908) 946-3800.

Circle 397 on reader card

WorkStation Source Offers ITG Software

Workstation Source announced the availability of HP's new Interactive Test Generator (ITG) software which provides a mouse driven environment designed specifically for instrument control.

Designed for ease of use, ITG automatically presents the user with a list of valid inputs to choose from, reducing the possibility of mistakes and virtually eliminating the need for typing. Any questions are answered by the on-screen help.

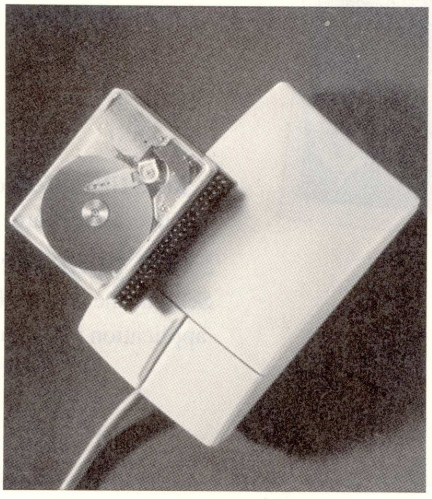
ITG's automatic code generation translates the user's interactive measurements into an application program and guarantees consistent, structured, error-free program coding. The code can be edited and annotated with comments during the session and stored to disk for later use.

Contact WorkStation Source Ltd., Unit 1, Danehill, Cutbush Park Industrial Estate, Lower Earley, Berkshire, U.K. RG6 4UT; 44 0734 759 292.

Circle 398 on reader card

HP Enhances 1.3-Inch Disk Drive

HP announced the second-generation HP Kittyhawk Personal Storage Module (PSM) which features increased durability, better power management and twice the storage capacity of its predecessor.



The HP Kittyhawk II PSM.

The HP Kittyhawk II PSM offers 42.8 MB of storage capacity. In addition, it empowers the users of non-computer products — such as digital imaging devices — to retain and manipulate more images, pictures and characters at a lower cost than IC-based memory.

The HP Kittyhawk is compatible with DOS 6.0 which includes a data compression

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*Pro*_EDI supports all ANSI X.12 standards and derivatives (such as TDCC, VICS, AIAG, etc.), and UN/EDIFACT.

*Pro*_EDI runs on HP 3000 computers, PCs, and UNIX systems (ATT SVR3, SVR4).

Single-tier pricing

*Pro*_EDI has one price tier for each hardware platform on which it runs. There are no added charges for CPU upgrades, new trading partners or EDI documents.

PSI

Pro Software, Inc.
Suite 240
725 Barclay Circle
Rochester Hills, MI 48307

(313) 299-0020 (Voice)
(313) 853-2442 (FAX)

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CIRCLE 277 ON READER CARD

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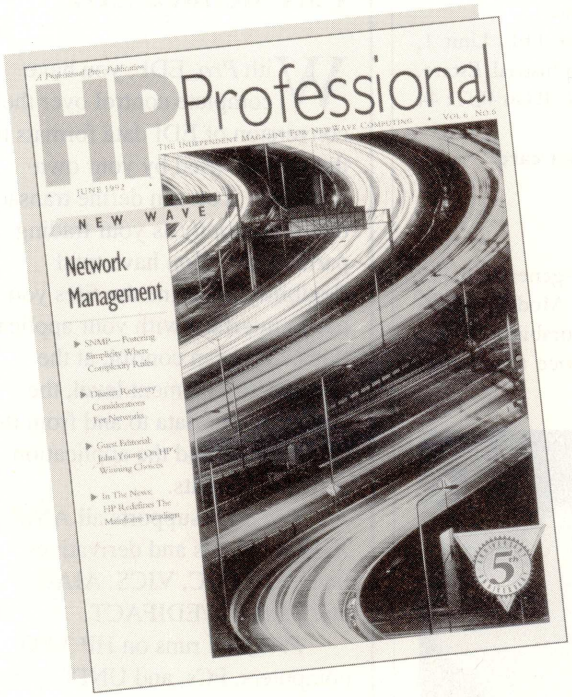

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ratio of 2 to1. This compression rate gives the HP Kittyhawk II PSM 80 MB of storage.

It also features HP's "smart" shock-sensing technology which detects impending impact and puts the drive into a protective mode to guard against data loss.

Price is $499.

Madge Networks Announces Smart 100 Ringnode Family

Madge Networks Inc. introduced the Smart 100 Ringnode family, a new line of 100 Mbps network adapter cards compatible with the Fiber Distributed Data Interface (FDDI) standard.

The Fast Token Ring is for users to create fast high-bandwidth networks using widely available equipment that supports FDDI over a variety of cabling media.

Madge's initial Fast Token Ring will be for EISA systems. The Smart 100 EISA Ringnodes are available in a variety of fiber and copper variants including both Single Attach Station (SAS) and Dual Attach Stations (DAS) versions.

The adapter cards also include an on-board processor which handles the SMT protocol.

The Smart 100 EISA Ringnodes are shipped with software drivers for NetWare 3.11 and 4.0, IBM LAN Server 2.0 and 3.0, and Microsoft LAN Manager 2.1 and 2.2.

Contact Madge Networks Inc., 2310 N. First St., San Jose, Calif. 95131-1011; (800) 876-2343.

Circle 392 on reader card

CADReivew Provides Window-Based Viewing

Advanced Technology Center (ATC) released CADReview for Windows, a Microsoft Windows-based entry level view and markup program. It is designed to provide an efficient pathway from paper drawings to electronic images.

CADReview allows you to view, mark-up, link, convert or print AutoCAD files, engineering drawings, technical illustrations and other graphical fields. Supported file formats include DWG, DXF, SLD, HPGL, BAK, GenericCAD, RLC, TIFF, GIF, TGA, PCX, DIB, RLE, BMP and Windows metafiles.

Print, plot and file conversions can be performed in the background, releasing the system to perform other tasks concurrently.

CADReview can link various file formats together. Other features include Fast Zoom, Always Active Zoom and Pan selection.

Price is $295 for a single user version.

Contact Advanced Technology Center, 22982 Mill Creek Dr., Laguna Hills, Calif. 92653; (714) 583-9119.

Circle 390 on reader card

Logitech Introduces 3-D Pointing Device

Logitech Inc. announced Space Control Mouse, an addition to their three-dimensional product line.

Space Control Mouse features an ergonomic shape, which fits comfortably in the hand and provides variable resistance in response to the amount of pressure users apply, helping to relieve fatigue and providing a more intuitive control method compared to a stationary device.

It includes nine programmable buttons that allow users to assign tasks such as panning, zooming, changing into 2D mode, and altering baud rate, report rate and tone generation.

Users can operate the device with all six degrees of freedom active at once (6D), or set it to respond to only the most dominant axis.

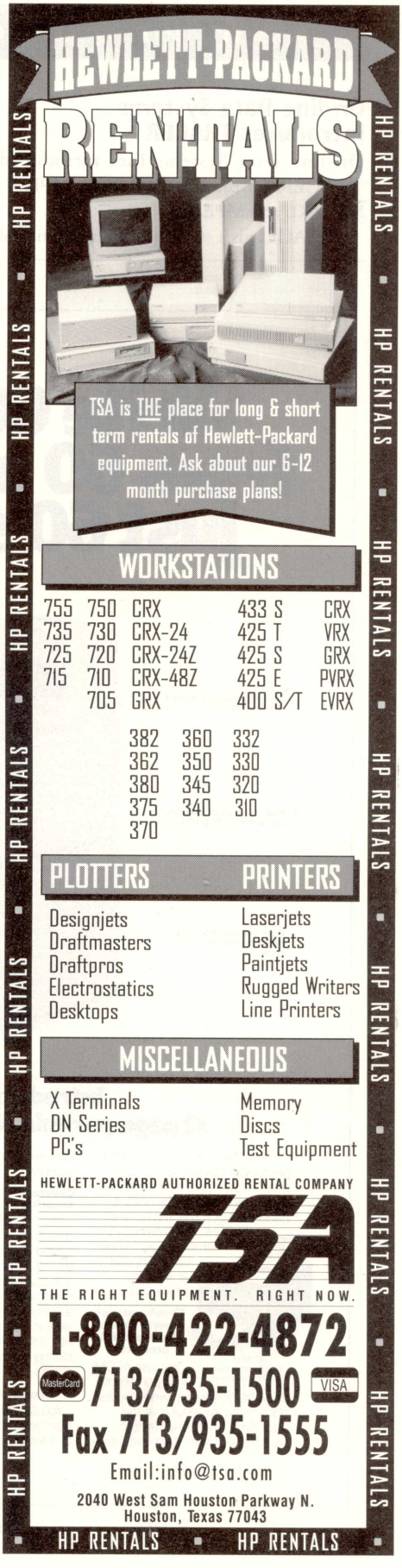
Space Control Mouse provides flexibility and an ergonomic shape.

The Space Control Mouse comes with drives for HP and Silicon Graphics workstations, and PCs.

Price is $999.

Contact Logitech Inc., 6505 Kaiser Dr., Fremont, Calif. 94555; (510) 795-8500.

Circle 384 on reader card



CIRCLE 241 ON READER CARD

On-line Data Systems Introduces TRACER

On-line Data Systems Inc. introduced TRACER for the HP 3000 Series MPE/V, MPE/XL and MPE/iX.

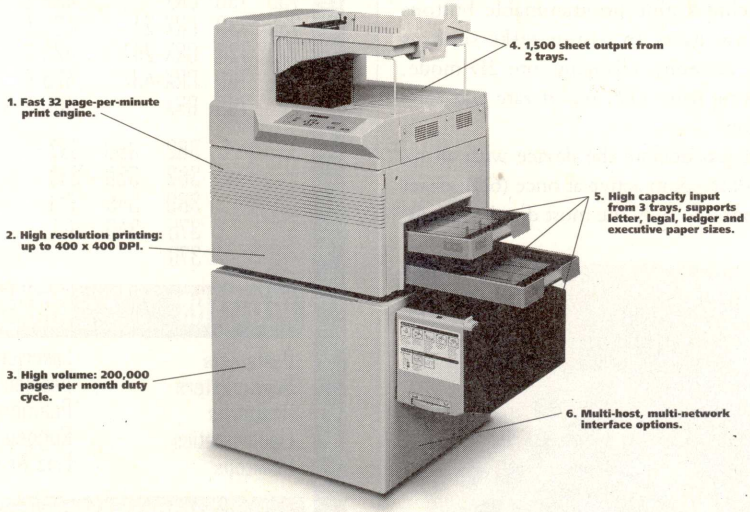
TRACER is a software optimization tool that can be implemented with any program or application to measure resource usage, optimize software code, expose redundant code and track down software bugs.

TRACER identifies performance deficiencies in new or existing applications. This analysis allows the MIS staff to pinpoint specific areas in the application code that require modification.

The introductory price is $495. Contact On-line Data Systems Inc., 10979 Reed-Hartman Hwy., Ste. 333, Cincinnati, Ohio 45242; (800) U-ASK-ODS.

Circle 380 on reader card

Write 60 checks from 60 accounts in just 60 seconds.



Introducing the first 32 page-per-minute laser MICR printer.

The MC5832 is our fastest MICR printer yet. Starting with a blank sheet of safety paper, it turns out completed checks in seconds. It prints the MICR line, the name of the bank, your company's name and logo, your signature, and all variable information.

MC 4816
16 pages per minute
50,000/mo duty cycle.

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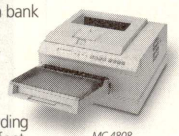

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Four Seasons Software Announces 4S-Report

Four Seasons Software announced 4S-Report, an industrial-strength report writer for end-users and application developers. 4S-Report generates queries and creates complex professional reports that run on UNIX (including OSF/1), MS-DOS and VMS. Reports generated with 4S-Report can access data from proprietary databases and integrate data into one report from multiple databases and operations systems, including mainframes.

4S-Report can create reports which access a wide variety of databases including HP Allbase, Informix, Oracle, Ingres, Sybase, Teradata, EDA/SQL, as well as COBOL, C-ISAM and ASCII files. A report created for one database can later be used with another database without change. Also, reports developed for one operating system can be moved to another operating system without change or recompilation.

Prices range from $300 to $37,000 depending on platform and operating system. Contact Four Seasons Software, 2025 Lincoln Hwy., Edison, N.J. 08817; (908) 248-6667.

Circle 363 on reader card

Crescendo Offers Fault-Tolerant FDDI/CDDI

Crescendo Communications Inc. introduced the first dual-attach SBus adapter which provides a feature set targeted specifically toward Sun SPARC-based servers supporting Fiber Distributed Data Interface (FDDI) over unshielded or shielded twisted-pair (UTP/STP) wiring. Based on Crescendo's Copper Distributed Data Interface (CDDI) architecture, the new adapter offers dual-redundant network connections for fault-tolerance, an on-board processor to reduce host overhead and a Simple Network Management Protocol (SNMP) agent for remote monitoring and control. A dual-attach FDDI SBus adapter for fiber-optic cable also was introduced.

The new adapters may either "dual-attach" directly to the dual-ring without a

concentrator or they may be "dual-homed," meaning they connect to the network via two redundant links to two separate concentrators.

Both adapters use an on-board processor to perform all SMT functions.

The CDDI SBus dual-attach adapter is priced at $1,995. The FDDI SBus dual-attach adapter is priced at $2,995.

Contact Crescendo Communications, 710 Lakeway Dr., Sunnyvale, Calif. 94086; (800) 238-CDDI.

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Martech Provides Affordable Memory

Martech announced the availability of its low-cost memory boards for new HP workstations. Martech is currently shipping upgrade sets of up to 64 MB for HP 9000 Models 715, 725, 735 and 755 running the HP-UX operating system. In addition, memory boards for nearly all HP 1000, 3000 and 9000 systems are available at reduced prices.

Contact Martech, 1151 W. Valley Blvd., Alhambra, Calif. 91803; (800) 582-3555.

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Command Center Plus Ported To UNIX Platforms

Pilot Software announced that Command Center Plus, an executive information system (EIS), is now available on the HP 9000 and IBM RS/6000 UNIX-based platforms.

Command Center Plus is an environment for developing, maintaining and using full-scale enterprise-wide GUI-based EISs. It retrieves a wide range of internal and external information, formats it and presents it as a series of colorful text, charts, graphs and tables. The workload is distributed between the host and the workstation, allowing the user to fully utilize each computing platform. Command Center Plus allows customers to bring Windows 3.x-based workstations and Macintosh System 7 computers into their enterprise-wide EISs.

Contact Pilot Software Inc., 40 Broad St., Boston, Mass. 02109; (617) 350-7035.

Circle 366 on reader card

SPEEDWARE Version 7.01 Supports Oracle

Speedware Corp. introduced SPEEDWARE Version 7.01 which offers full support of Oracle, the introduction of a multi-user environment, support of Novell NetWare, extended OMNIDEX support, embedded SQL and views for support of RDBMSs. SPEEDWARE Version 7.01 is available on HP 3000, HP 9000, RS/6000 and SCO UNIX.

Speedware's multi-user Designer feature allows several users to concurrently access its real-time object-oriented application repository.

Version 7.01 also offers extended support for OMNIDEX which provides high-speed retrieval and additional data retrieval capabilities. The addition of embedded SQL and views enhances the support of RDBMS by supporting native features.

Systems developed in SPEEDWARE are portable across multiple platforms including MPE/iX (HP 3000), MS-DOS, MS Windows, SCO UNIX, OS/2, UNIX, OS/400 (AS/400) and AIX (RS/6000) systems.

Contact Speedware Corp., 150 John St., 10th Fl., Toronto, Ontario M5V 3E3; (416) 408-2880.

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Dun & Bradstreet Offers SmartStream Series

Dun & Bradstreet Software announced Financial Stream, the first of four SmartStream Series application suites, and SmartStream Decision Support 2.0, a client-server analysis and reporting product.

The SmartStream Series is a client-server-based enterprise solution comprised of integrated business applications, comprehensive decision support facilities and a workflow-enabled platform.

Financial Stream provides a core of integrated financial applications that enable cross-functional execution and monitoring of critical financial information and business processes and provides quick feedback for proactive decision-making.

SmartStream Decision Support 2.0 — comprised of SmartStream, SmartStream Analyzer and InterQ — automates host-to-server-to-user distribution of information, decentralizing decision making and providing line managers with personalized views of information so they can analyze facts, trends and exceptions that affect their area of responsibility.

Contact Dun & Bradstreet Software, 3445 Peachtree Rd. N.E., Atlanta, Ga. 30326; (404) 239-2000

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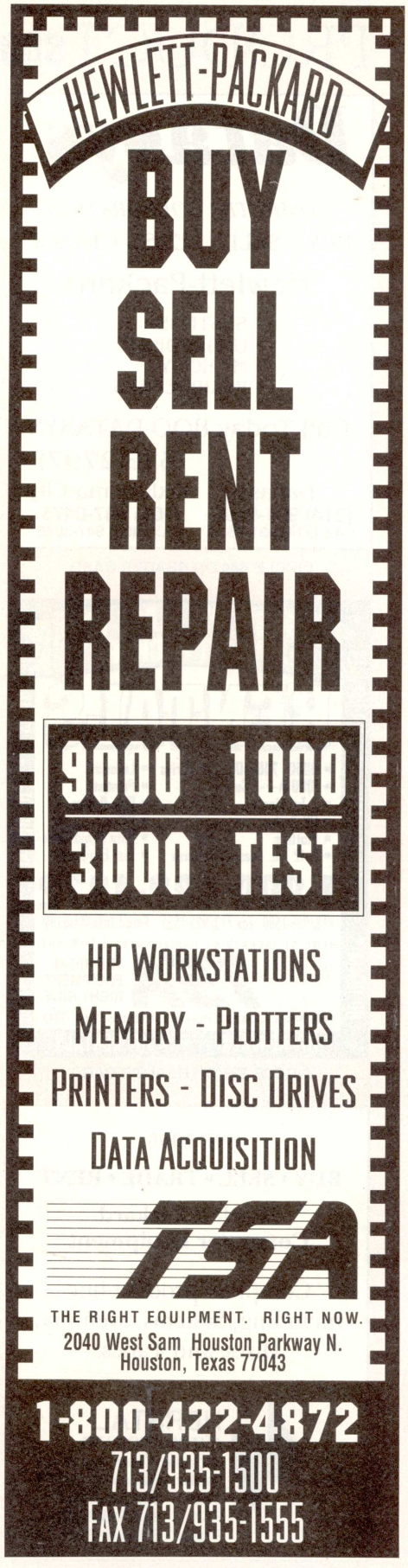

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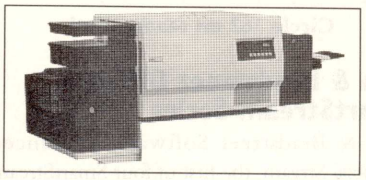

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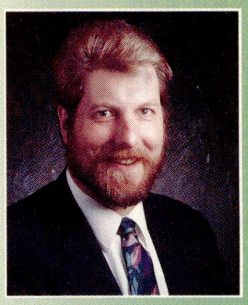

Gordon McLachlan

It used to be taken for granted that MIS shops — especially large ones — would forge long-term relationships with vendors to get better discounts, better support or maybe, just the nice warm, fuzzy feeling that came with some grand vendor strategy. However, that approach has been challenged by the movement toward standardization and the idea that computers are commodities.

In the old days, linking up with a single vendor was an act of self-preservation. Standards didn't exist. And mixing-and-matching equipment involved too many risks. If you bought an HP 3000, you were an HP shop, and probably bought HP peripherals, HP PCs and HP everything else.

The problem with strategic vendor partnerships is that they're usually based on volume purchase agreements. As long as you continue to buy boatloads of equipment, you get good discounts, as well as a little extra support and attention from the sales force. This is great as long as you've got deep pockets, but once the rate of orders starts to slow down, your sales person, and the support people they would drag in to keep you happy, start to become scarce. All of a sudden, you don't have a partnership for the future, you have a legacy.

I noted this phenomenon when I controlled the spending for a manufacturing systems project that put about $12 million into HP's pockets. Things were great until we got down to the last few hundred thousand dollars. Once the well began to run dry, you could see HP packing up its things in search of another watering hole.

Even if you can sustain a revenue stream for your vendor, you still might not get everything you bargained for. One company I worked with had a large joint venture with IBM. In return for a monopoly on the company's PC business, Big (but shrinking) Blue kicked in a contingent of technical wizards and promised to share its product plans more openly.

There were definite economic benefits to this agreement. By giving an exclusive contract to IBM for PS/2s, the customer extorted exceptionally good pricing on equipment, as well as a significant number of reasonably talented IBM tech weenies. This alliance also gave the company better insight into IBM's product plans — such as they were, to help them with strategic planning.

Watch what the industry does — just like the vendors do. It takes more work, but their crystal ball is no better than yours, and may in fact, be worse.

This joint venture took itself quite seriously, setting about developing standards and a technology plan. The idea was to support a stable of software that was best-in-its-class. But, because of the nature of the beast, the modus operandi was to identify an application area they wanted to standardize, argue for a while about why the IBM software offering didn't have what it took and then decide on something else.

After a while, it became pretty clear that all the alliance was getting for IBM was orders for PS/2s, which despite IBM's efforts have become a commodity item just like every other PC clone. Despite the fact that the customer swallowed IBM's lure on OS/2, hook, line and sinker, IBM couldn't reel them in. The company finally spit out the hook and swam away, using PC clones, Windows, Novell NetWare PC LANs and TCP/IP on UNIX boxes — like everyone else.

The problem isn't unique to IBM or that customer. If you bought HP's strategic line a few years back, you would have started out with HP 3000s, HP 150s, "classic" Vectras and crippled MS-Net LANs. You would have then worked your way through a series of abominations with NS/3000 and LAN Manager/X, sucked up promise after promise about the Open Software Foundation's DCE, and wound up with PC clones, Novell NetWare PC LANs and TCP/IP on UNIX boxes — like everyone else.

Now there's a whole new generation of equipment and software — everything you bought is obsolete. HP's "strategy" would have you replacing everything in search of a new vision. When you add up the score, HP gets a lot of your business, and you get the business from HP.

The days of the warm fuzzy feeling are over. You have to step up to the responsibility. Watch what the industry does — just like the vendors do. It takes more work, but their crystal ball is no better than yours, and may in fact, be worse. I can't think of a single vendor on which I would bet my career.

Instead of blindly following any vendor, you'll be in a lot better shape if you keep your eyes open and follow your own instincts. ■

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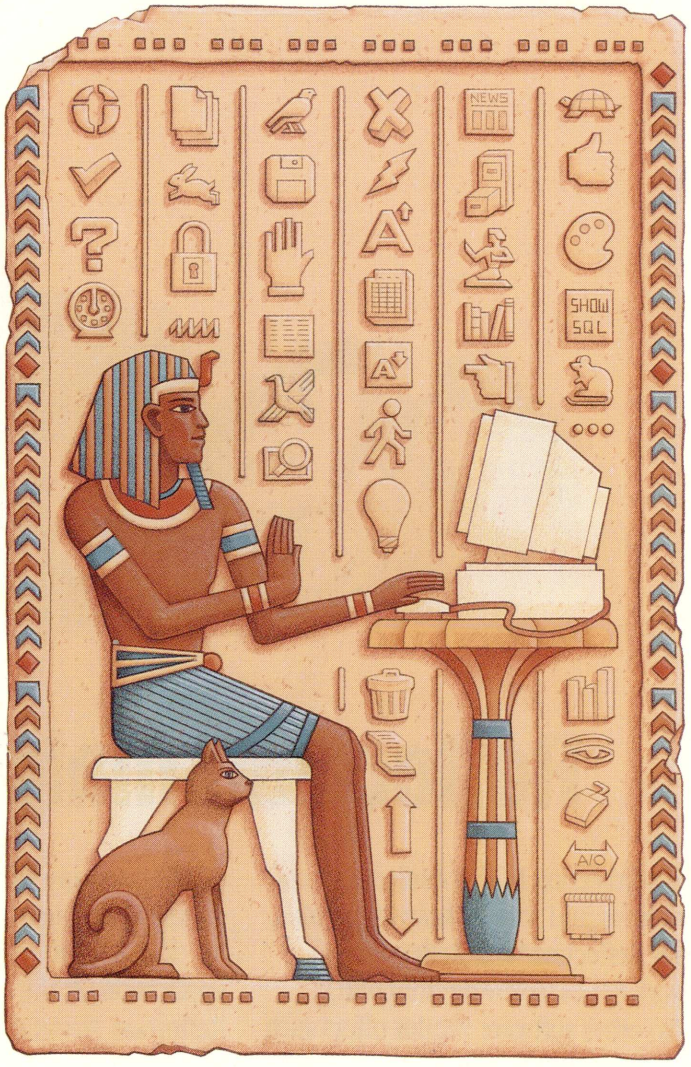

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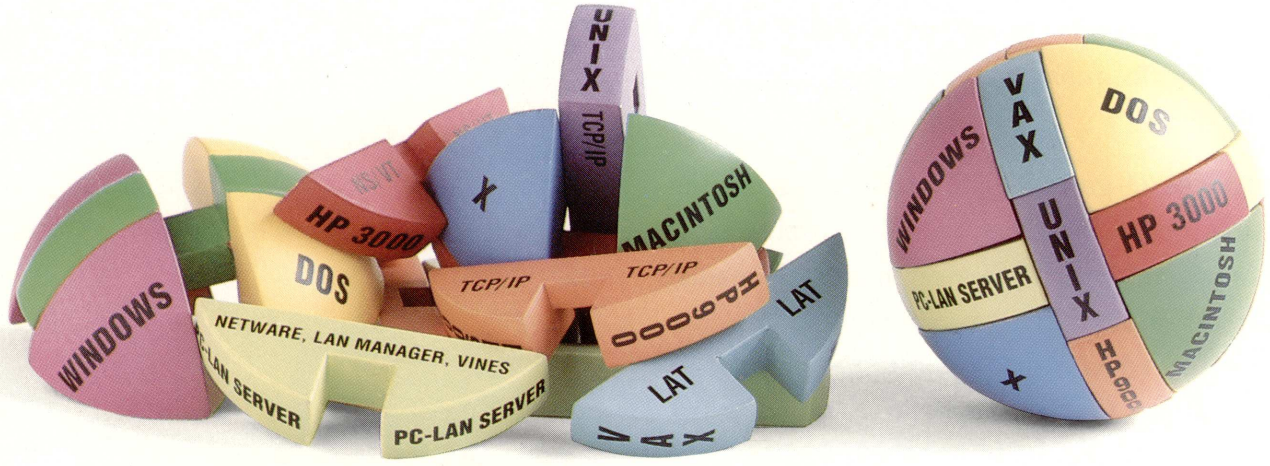

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